FEDERAL PUBLIC SERVICE COMMISSION

COMPETITIVE EXAMINATION – 2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

ESSAY

TIME ALLOWED: THREE HOURS	MAXIMUM MARKS: 100

NOTE:(i) Make an outline and write a COMPREHENSIVE ESSAY (2500-3000 words) on any ONE of the given topics. Make sure you use different forms of discourses, e.g. exposition, argumentation, description and narration. Credit will be given for organization, relevance and clarity.

(ii) No Page/Space be left blank between the answer. All the blank pages of Answer Book must be crossed.

1. **Instruction in youth is like engraving in stone.**

2. **The one who uses force is afraid of reasoning.**

3. **Not all recycling projects are cost effective.**

4. **The fool speaks, and the wise listens.**

5. **A friend walks in when everyone else walks out.**

6. **Online learning is not only convenient but often more effective than traditional classroom instruction.**

7. **To encourage healthy eating, higher taxes should be imposed on soft drinks and junk food.**

8. **People have become overly dependent on technology.**

9. **Both parents should assume equal responsibility in raising a child.**

10. **Boys will be boys.**

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION – 2023 FOR RECRUITMENT TO
POSTS IN BS-17 UNDER THE FEDERAL GOVERNMENT
ENGLISH (PRECIS & COMPOSITION)

Roll Number

TIME ALLOWED: THREE HOURS	**PART-I (MCQS)**	**MAXIMUM MARKS = 20**
PART-I(MCQS): MAXIMUM 30 MINUTES	**PART-II**	**MAXIMUM MARKS = 80**

NOTE:
  (i)   Part-II is to be attempted on the separate **Answer Book.**
  (ii) Attempt **ALL** questions from **PART-II**.
  (iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
  (iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
  (v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
  (vi) Extra attempt of any question or any part of the question will not be considered.

PART-II

Q. 2.   Write a précis of the following passage and suggest a suitable title: (20)

On the question of freedom in education there are at present three main schools of thought, deriving partly from differences as to ends and partly from differences in psychological theory. There are those who say that children should be completely free, however bad they may be; there are those who say they should be completely subject to authority, however good they may be; and there are those who say they should be free, but in spite of freedom they should be always good. This last party is larger than it has any logical right to be; children, like adults, will not all be virtuous if they are all free. The belief that liberty will ensure moral perfection is a relic of Rousseauism, and would not survive a study of animals and babies. Those who hold this belief think that education should have no positive purpose, but should merely offer an environment suitable for spontaneous development. I cannot agree with this school, which seems to me too individualistic, and unduly indifferent to the importance of knowledge. We live in communities which require co-operation, and it would be utopian to expect all the necessary co-operation to result from spontaneous impulse. The existence of a large population on a limited area is only possible owing to science and technique; education must, therefore, hand on the necessary minimum of these. The educators who allow most freedom are men whose success depends upon a degree of benevolence, self-control, and trained intelligence which can hardly be generated where every impulse is left unchecked; their merits, therefore, are not likely to be perpetuated if their methods are undiluted. Education, viewed from a social standpoint, must be something more positive than a mere opportunity for growth. It must, of course, provide this, but it must also provide a mental and moral equipment which children cannot acquire entirely for themselves.

Q. 3.   Read the following passage carefully and answer the questions given at the end.   (20)

The majority of people have always lived simply, and most of humanity still struggles on a daily basis to eke out a meager existence under dire circumstances. Only in affluent industrialized countries do people have the luxury of more goods and services than they need to survive. On the basis of material wealth, North Americans and Europeans should be the happiest people on earth, but according to the 2012 Happy Planet Index (HPI), they are not. Surprisingly, what had begun as an experimental lifestyle evolved into a quiet revolution that spread the word through books such as Duane Elgin's best-selling *Voluntary Simplicity: Toward a Way of Life that is Outwardly Simple, Inwardly Rich* (1981), as well as numerous magazines, alternative communities of the like-minded, and, later, Internet websites. Combined with a growing awareness of the environmental consequences of consumerism, the voluntary simplicity movement sought to reduce the consumption of goods and energy and to minimize one's personal impact on the environment. "Voluntary" denotes a free and conscious choice to make appropriate changes that will enrich life in a deeper, spiritual sense. "Simplicity" refers to the lack of clutter, that is, eliminating all those things, patterns, habits, and ideas that take control of our lives and distract us from our inner selves. However, this is not to be confused with poverty, which is involuntary, degrading, and debilitating. Neither does it mean that people must live on a farm or reject progress or technology, or do without what is necessary for their comfort and welfare. To practice voluntary simplicity, one must differentiate between what one wants (psychological desires) and what one needs (basic requirements of life), and seek a healthy balance that is compatible with both. In a consumer society where advertising bombards us with the message that without this, that, and the other product, we are unsuccessful, undesirable, and unimportant, being clear on what you really need and resisting what you don't can be an ongoing struggle. The beauty of voluntary simplicity is that it is a philosophy, and not a dogma. How one goes about it depends on individual character, cultural background, and climate. For this, three Rs (i.e., Reduce, Recycle & Reuse) represent the best way to get a handle on rampant consumerism. In economies driven by the quest for ever more, living with less is erroneously equated with poverty and social inferiority. By conserving energy, for instance, you are actually ensuring that more resources are available for future use. By making a frugal budget and sticking to it, you can eliminate unnecessary expenses. Recycling paper, metal, plastic, and glass and reusing building materials and old clothing keep materials in the loop and out of landfills. Pooling skills and resources through barter networks not only saves money, but sharing with others establishes bonds and fosters a sense of community. With the glut of cheap goods that are usually designed for obsolescence, quality products that last are becoming progressively harder to find. In the long run, a more expensive but durable and repairable item or even an older used item that is still in good condition is a better investment than a brand new piece of junk that will only break down and end up in the trash. Thus, at the heart of voluntary simplicity is the conscious realization that less is really more. Less consumption means more resources for future generations. Less activity that brings little satisfaction or reward is more time for yourself and your loved ones. Less stuff is more space to move around in. Less stress means more relaxation and better health. Less worry provides more enjoyment and more fulfillment in life.

ENGLISH (PRECIS & COMPOSITION)

Questions: **(4 marks each)**

1. How important is happiness to most people, and what is the relationship between material wealth and happiness?
2. How does the author characterize the concept of 'Voluntary Simplicity' as a movement and as a philosophy?
3. What impact is feared by the growing consumerism of modern society?
4. What influences make it difficult for people to reduce their consumption patterns?
5. What are the challenges and rewards of voluntary simplicity?

Q. 4.   Correct only FIVE of the following: **(10)**

(i)   His knowledge of languages and international relations aid him in his work.

(ii)   The ambassador, with his family and staff, invite you to a reception at the embassy on Tuesday afternoon.

(iii)   This year, he will sit in the CSS examination.

(iv)   The Chief Executive will let us know whether or not he can attend the meeting.

(v)   When he came back from vacation, Aslam and me plan to look for another apartment.

(vi)   If some of you make a noise, they shall be punished.

(vii)   He came to me to enquire what is the salary attached to the appointment.

(viii) I am too tired that I do not hunt words and idioms in my English book.

Q. 5. (a)   Punctuate the following text, where necessary.   **(05)**

while taking a nap on the porch one hot summer day hodga dreamed that a stranger promised to give him ten pieces of gold the stranger placed them in hodgas hand one by one until he reached the tenth piece which he hesitated to give him come on what are you waiting for said hodga you promised me ten just then he woke up he immediately looked at his hand and saw that it was empty he quickly shut his eyes again stretched out his hand and said all right i ll settle for nine.

(b)   Re-write the following sentences (ONLY FIVE) after filling in the blanks with appropriate Prepositions.   **(05)**

(i)   The neighbours came _____ my house to see what's going on in the house.

(ii)   She sat _____ the shade of the tree.

(iii)   The moon does not shine _____ its own light.

(iv)   The burglar jumped _____ the compound wall.

(v)   She entered _____ an agreement with them.

(vi)   I have been working hard _____ arithmetic.

(vii)   He got _____ his bicycle.

(viii) It cannot be done _____ offence.

Q. 6.   Use only FIVE pairs of words in sentences clearly illustrating their meanings.   **(10)**

(i) Antic, Antique		(ii) Draught, Drought	
(iii) Quaint, Queer		(iv) Momentary, Momentous	
(v) Compliment, Complement		(vi) Eminent, Imminent	
(vii) Faint, Feint		(viii) Immigrant, Emigrant	

Q. 7.   Translate the following into English by keeping in view figurative/idiomatic expressions.   **(10)**

بزرگ نے بتایا کہ جنگل کے پار ایک پہاڑ ہے جہاں وہ پھول اُگتا ہے جس کی خوشبو سے
آنکھوں کی کھوئی ہوئی روشنی لوٹ آتی ہے ،مگر پہاڑ بہت بلند ہے اور اس پر بے شمار
چٹانیں ہیں ،کانٹے دار جھاڑیاں ہیں اور بڑے بڑے پتھر ہیں جو راستہ روک لیتے ہیں ۔ اِس پہاڑ
پر جانے کے لیے کئی لوگ آئے اور چلے گئے مگر ایسا کوئی شخص نہیں آیا جو پھول تک
پہنچا ہو۔ شاید اِسی لیے دُنیا میں دُکھ اور تکلیف ہے اور انسان روشنی کی تلاش میں ہے۔

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR ECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT
GENERAL KNOWLEDGE-I (GENERAL SCIENCE & ABILITY)

Roll Number

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80

NOTE:
(i) **Part-II** is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II** by selecting **TWO** questions from **EACH SECTION.** **ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.
(vii) **Use of Calculator is not allowed.**

PART – II
(SECTION – A)

Q. 2. (a) Define ceramic and nano-ceramic materials. Why the nano-ceramics show better properties than their ceramic counterparts? Write the applications of ceramic materials. (5)

(b) What is 'Black Hole'? How black holes are formed and discovered? (5)

(c) Write two applications of each of the following electromagnetic radiations: (5)
    (i) Ultraviolet   (ii) Infra-red   (iii) Microwaves
    (iv) Radio waves   (v) X-rays.

(d) What is Wildfire? Explain its types, causes, spread and preventions. (5)**(20)**

Q. 3. (a) (i) Why the bat and whale are considered as mammals? (5)
    (ii) Write a note on liver juice 'Bile'.

(b) How the urine is formed? Describe the role of kidney in excretion. (5)

(c) (i) How a bacterial cell is different from a plant cell? (5)
    (ii) What do you think cold-blooded animals are slowed down by low temperatures?

(d) What is hepatitis, its types, causes, prevention, and cure? (5)**(20)**

Q. 4. (a) What is the difference between fog and smog? What are the causes of smog and its effects on human health? Write short note on any one of the latest technologies to eliminate smog to avoid atmospheric pollution. (5)

(b) What is the role of oxygen-demanding wastes in water pollution? How it can be prevented? (5)

(c) What is the biosphere? Write a note on the 'Energy Resources' available in the biosphere. (5)

(d) What are the different layers of the atmosphere? On what basis these layers are classified? In which layer 'Auroras' are formed and where do satellites orbit? (5)**(20)**

Q. 5. (a) What are antioxidants and why are they used in foods? Write a short note on natural and synthetic antioxidants. (5)

(b) How the carbohydrates, proteins, and fats are digested in humans? (5)

(c) How does the Navstar GPS system work for different applications? (5)

(d) (i) Differentiate between network and internet. (5)**(20)**
    (ii) What is the difference among application, program and software?
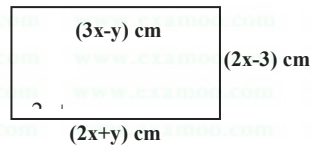
(SECTION – B)

Q. 6. (a) A telephone company charges initially Rs.0.50 and then Rs. 0.11 for every minute. Write an expression that gives the cost of a call that lasts N minutes. (5)

(b) Find the missing number in the series below (5)

        (i) 1, 8, 4, 27, 9, ?   (ii) 3,6,8,16,18,?   (iii) 2, 8, 512, ?

        (iv) 81 ,9,64 ,8,?,12   (v) 6, 11, 21, 36, 56, ?

(c) The perimeter of the rectangle given below is 114 cm. Find the area of the rectangle. (5)

    (3x-y) cm

    (2x-3) cm

    (2x+y) cm

(d) Ahmad stands at point D, 2m in front of a spotlight at point A. He is 1.6m tall and is facing the wall of a building which is 10.5m away from him. How tall (BC) is his shadow on the wall of the building. (5)(20)

    C

    E

    1.6m

    B   10.5m D 2m A
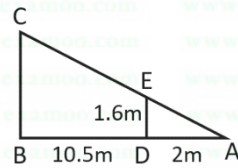
Q. 7 (a) Ali is standing 10 meters away from a tree. The distance of his eyes from his feet is 1.5 meter. Given that the distance from his eyes to the top of the tree is 15 meters, find the height of the tree. (5)

(b) Find out the correct word from the jumbled spellings given below. (5)

LNUGEF, CKANS, CIREFE, EERAANMOGTP, MNIKPPU.

(c) Draw and write the total number of lines of symmetry in a regular hexagon and octagon. How many lines of symmetry are there in a circle? (5)

(d) The height of the Egyptian pyramid is 146.6 meters and a base length is 230.6 meters. Find the volume of that pyramid. (5)(20)

Q. 8. (a) Ali buys an oven for Rs. 36800 and sells it at a gain of 8.5%. For how much does he sell it? (5)

(b) A card is drawn at random from a box containing 12 cards numbered 1,2,3,4,5,….,12. Find the probability of drawing (i) '8', (ii) an even number, (iii) a perfect square, (iv) a negative number and (v) a number less than 13. (5)

(c) The scintillation nuclear radiation detector detects the alpha rays per second. When the energy of the alpha rays (E_α) in MeV increases, the number of counts (N_c) on the detector also increases linearly as shown in the table below. (5)

E_α (MeV)	0.25	0.45	0.65	1	1.4
N_c	17500	23500	29500	40000	52000

Draw the graph of N_c as a function of E_α (MeV) and find the energy of unknown alpha ray if the number of counts are 31600.

(d) The y is directly proportional to x^2 and y = m for a particular value of x. Find an expression for y in terms of m, when this value of x is doubled. (5)(20)

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

Roll Number

GENERAL KNOWLEDGE-III
(PAKISTAN AFFAIRS)

TIME ALLOWED: THREE HOURS	**PART-I (MCQS)**	**MAXIMUM MARKS = 20**
PART-I(MCQS): MAXIMUM 30 MINUTES	**PART-II**	**MAXIMUM MARKS = 80**

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II**. **ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.

PART-II

Q. No. 2. Write a detailed and systematic analysis of the charismatic leadership of Quaid-e-Azam Mohammad Ali Jinnah, the leader of Indian Muslims during the crisis-ridden decade of 1937-47. **(20)**

Q. No. 3. Having the largest irrigation system in the world, the land of the sub-continent served as the main food supply basket for the British power for more than a century, but now Pakistan has to import food commodities. Discuss in detail the causes of this agricultural decline. **(20)**

Q. No. 4. Industrialization is the backbone of the modern economic system and uplifts the standard of living of the masses. Elaborate causes for the hindrance of industrial development in Pakistan. **(20)**

Q. No. 5. The evolution of democratic system has always remained a dilemma in Pakistan, even after passing more than seven decades of its existence the democracy could not get its roots. Discuss in detail. **(20)**

Q. No. 6. Joining the US led coalition in the war against terrorism has many short and long term repercussions for Pakistan. Elaborate. **(20)**

Q. No. 7. Pakistan is located on the cross-road of South Asia. Explain its geo-strategic/political importance and challenges. **(20)**

Q. No. 8. Pakistan is considered to be the fifth-largest youth bulge country in the world. Given this youth bulge, deliberate on ways forward for Sustainable Economic Development in Pakistan. **(20)**

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION – 2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

Roll Number

ISLAMIC STUDIES

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80

NOTE: (i) Part-II is to be attempted on the separate **Answer Book**.
  (ii) Attempt **ONLY FOUR** questions from **PART-II**. **ALL** questions carry **EQUAL** marks.
  (iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
  (iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
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  (vi) Extra attempt of any question or any part of the question will not be considered.

PART-II

Q. No. 2. What is the Qur'anic argument on the Life Hereafter? What are its impacts on the individual and collective life of a human being? **(20)**

Q. No. 3. Discuss the Holy Prophet's (ﷺ) Role as a Model for Military Strategy. **(20)**

Q. No. 4. Elaborate the rights of daughters granted by Islam and how these are denied by Muslims in the contemporary world? **(20)**

Q. No. 5. Define Ijma'(consensus) and explain its different kinds. Can legislation by a parliament of an Islamic state be regarded as a valid consensus? **(20)**

Q. No. 6. Analyze the Charter of Madina as a social contract. **(20)**

Q. No. 7. What are the motives of extremism in Pakistan? How can the society get rid of extremism by following the teachings of Islam? **(20)**

Q. No. 8. Write notes on the following: (10 each) **(20)**
  (i) Human rights in the light of the Sermon of Farewell Pilgrimage.
  (ii) Social Justice in an Islamic Society.

URDU VERSION

سوال نمبر 2: اخروی زندگی کے بارے میں قرآنی استدلال کیا ہے؟اس کے انفرادی اور اجتماعی زندگی پر کیا اثرات مرتب ہوتے ہیں؟ **(20)**

سوال نمبر 3: پیغمبر اقدس ﷺ کی حیات طیبہ جنگی حکمت عملی کے لیے نمونہ عمل ہے، وضاحت کریں۔ **(20)**

سوال نمبر4: اسلام نے بیٹیوں کو کیا حقوق عطا کیے ہیں؟اس کی وضاحت کریں اور معاصر دنیا کے مسلمان انہیں کیسے ان حقوق سے محروم رکھے ہوئے ہیں؟ **(20)**

سوال نمبر5: اجماع کی تعریف کریں اور اس کی مختلف اقسام کی وضاحت کریں۔ کیا ایک مسلم ریاست کے ذریعے کی گئی قانون سازی کو اجماع قرار دیا جا سکتا ہے؟ **(20)**

سوال نمبر 6: میثاق مدینہ کا بطور سماجی معاہدہ تجزیہ پیش کریں۔ **(20)**

سوال نمبر 7: پاکستان میں انتہا پسندی کے محرکات کیا ہیں؟اسلامی تعلیمات کی روشنی میں ان سے کیسے نجات حاصل کی جا سکتی ہے؟ **(20)**

سوال نمبر 8: مندرجہ ذیل پر نوٹ لکھیں: **(20) (10+10)**

(الف) - خطبہ حجۃ الوداع کی روشنی میں حقوق انسانی (ب)۔ اسلامی

معاشرے میں سماجی انصاف

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT
ACCOUNTANCY AND AUDITING, PAPER-I

Roll Number

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80

NOTE: **(i)** Part-II is to be attempted on the separate **Answer Book.**
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    (iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
    (iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
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    (vi) Extra attempt of any question or any part of the question will not be considered.
    (vii) Use of Calculator is allowed.

PART – II
SECTION – I

Q. 2. **(A)** What are the Accounting Principles? Define any four accounting principles shortly. (5)

    (B) What are the Accounting Conventions? Define any four accounting conventions shortly. (5)

    (C) The below mentioned balances are extracted from the books of Emerging Technologies Pvt. Ltd. as on 31st August 2022.

Head of Account	Amount
Sundry expenses	166,000
Opening Stock	400,000
Premises	3,775,000
Furniture	1,350,000
Machinery	2,600,000
Drawings	250,000
Purchases	6,455,000
Sales	12,262,000
Discount received	47,000
Discount allowed	54,000
Carriage outward	18,000
Returns inward	122,000
Return outwards	28,000
Closing Stock	372,500
Wages and salaries	1,750,000
Cash in hand	940,000
Rent, rates and taxes	137,000
Rent received in advance	53,000
Bills receivables	192,000
Trade creditors	2,076,000
Book debts	3,150,000
Bills payable	130,000
Bank loan	580,000
Capital	6,200,000
Carriage inward	17,000

    Required: Prepare a Trial Balance as on that date in a proper format. (10) **(20)**

Q. 3. Deluxe Software Private Limited closes its books on 31st December every year. You are provided with the following data:

Shareholders Equity	**(Rs.'000')**	
	2021	**2020**
Opening	700	600
Profit after tax	220	200
	920	800
Dividend	(100)	(100)
Closing	820	700
Other data		
Number of Shares (in '000s)	60	60

Required:

(a) On the basis of above data, compute the following for the year 2020 and 2021   (5)
        a. Earnings per share (EPS)
        b. Return on closing equity (ROE)
        c. Book value per share (BV)

(b) Compute dividend per share and rate of dividend for the year 2022.   (5)

(c) For the year ending 31st December 2022 the management decided to aim for EPS Rs.4.00 (9% higher than for the year 2021) and return on closing equity of 25%. Compute the estimated book value as at 31st December 2022 assuming that management targets are achieved. Also compute estimated figures for Profit after Tax, Dividend and Equity.   (10)   **(20)**

Q. 4.   **(A)**   Post-closing Trial Balance of Premium Fabrics Private Limited for the year ended December 31, 2021 and 2022 are as follows:

	2022	2021
Equities and Liabilities		
Issued and paid-up capital	5,000,000	5,000,000
Short-term running finance	3,000,000	800,000
Unappropriate profit	400,000	300,000
Trade Creditors	3,000,000	1,000,000
Accumulated Depreciation:		
Plant and Machinery	900,000	600,000
Motor Vehicle	420,000	280,000
	12,720,000	**7,980,000**
Assets		
Land and Building	2,500,000	1,500,000
Plant and Machinery	3,000,000	2,500,000
Motor vehicles	620,000	580,000
Stock in Hand	3,600,000	1,100,000
Trade debtors	3,000,000	2,300,000
	12,720,000	**7,980,000**

Additional data:
- During the year 2022, a dividend @ 10% was distributed to the shareholders. The paid-up value of each share is Rs. 10/-
- A Motor vehicle, having original cost of Rs. 100,000 and depreciated book value of Rs. 60,000 was sold for Rs. 80,000.
- Gross funds generated from operations during the year was Rs. 1,060,000.

Required: prepare a cash flow statement of Premium Fabrics as per IAS-7 for the year 2022.

(B)   Mr. Haider started a business on March 1st 2022 with a capital of Rs. 645,000. His (10) newly appointed bookkeeper records transaction on simple papers. His cash book page shows following transactions for the year.

Particulars	Amount	Particulars	Amount
Expenses Paid	27,500	Sales on cash	322,000
Receipts from debtors	241,000	Drawings of Mr. Haider	25,500
Purchase of Motorbike	92,000	Payments to creditors	322,000
Purchases on cash	148,000		

On December 31st 2022 value of closing stock is 46,000. The payables and receivables are Rs.125,000 and Rs. 80,000 respectively. Useful life of motorbike is 8 years and salvage value will be 32000. Bookkeeper decided to use the straight-line method of depreciation for the whole useful life of motorbike.

Required: Prepare Trading and Profit and Loss account and Balance Sheet as on 31st (10)   **(20)** December 2022.

SECTION – II

Q. 5.   **(A)**   Eagle Star is a manufacturing company. The Company uses Rowan Premium bonus scheme for its workers payroll. Workers are also entitled to dearness allowance of Rs. 2,400 per week of 48 hours. Mr. Afzal is one of the workers of that company. His basic wage rate is 1,200 per day of 8 hours. His time sheet for the week is as under:

Job Name	Time Allowed	Time Taken
Crafting	25 hours	20 hours
Assembling	30 hours	20 hours
Idle time (Waiting)	-----	8 hours

Required: Calculate gross wage of Mr. Afzal for the week.   (10)

(B) An Automobile factory will use 500,000 tyres for its production in coming year. The incremental cost of placing an order is Rs. 8,000. The cost of storing a tyre for whole year is Rs. 2000.Lead time on an order is 5 days and the company wishes to keep reserve supply of two days usage. Usage per day will be constant in whole work year. Company work year consists of 250 days.

Required: Calculate Economic Order Quantity and Reorder point.

(10) **(20)**

Q. 6. **(A)** A manufacturing company of Lahore submits the following information for the year ending 31st December 2022:

Particulars	Amount	Particulars	Amount
Sales	4,500,000	Raw Material 1st January	150,000
Purchases	2,020,000	Finished Goods 1st January	700,000
Tools Expenses	45,000	Indirect Labour	50,000
Depreciation of Plant	45,000	Power, Heat & Light	30,000
Work in process 1st January	300,000	Finished Goods 31st December	605,000
Purchase Retunes	20,000	Depreciation of machinery	60,000
Fire Insurance	8,000	Raw Material 31st December	290,000
Direct Labour	590,000	Work in Process 31st December	250,000
Misc. Manufacturing Costs	9,000	Indirect Material Consumed	50,000
Selling Expenses	5% of sales	Administrative Expenses	2% of sales

Required: Prepare an Income Statement for the year ended 31st December 2022 (10)

(B) Khizra manufacturing corporation has fixed cost for the year ended 31st December 2022 is Rs. 400,000. Variable cost per unit is Rs. 20. Each Unit sells at Rs. 100.

Required:

a) Break Even point (both in units and value) (2)
b) If turnover for the next year is Rs. 800,000, calculate the estimated contribution and profit, assuming the cost and selling price remain the same (4)
c) A profit target of Rs. 400,000 has been desired for the next year. (4) **(10) (20)**
   Calculate the turnover required to achieve the desired result.

Q. 7. The Balance Sheet of Fazal Din & Co. as on 31st December 2021 was as follows:

BALANCE SHEET

Liabilities & Capital	Amount	Assets	Amount
Current Liabilities	Rs. 17,500	Cash	Rs. 5,000
Paid-up-Capital		Accounts Receivable	Rs. 10,000
3,000 ordinary shares of Rs. 10 each	Rs. 30,000	Materials	Rs. 4,000
Retained Earnings	Rs. 10,000	Work in Process	Rs. 2,000
		Finished Goods	Rs. 6,000
		Prepaid expenses	Rs. 500
		Fixed Assets(net)	Rs. 30,000
	Rs. 57,500		**Rs. 57,500**

During the year 2022 the retained earnings increase 50% as a result of good business. No dividend was paid during the year. Balances of Accounts receivables, prepaid expenses, current liabilities and paid-up capital were the same as 31st December 2022 as they had been on 31st December 2021, Inventories were reduced as follows:

Material   50%
Work in process   50%
Finished goods   33-1/3%

Fixed Assets were reduced by depreciation of Rs. 4,000 charged 3/4th to factory overhead and 1/4th to administrative expenses. Sales were made of Rs. 60,000 on account of finished goods costing Rs. 40,000. Direct labor cost was Rs. 9,000. Factory overhead was applied at the rate of 100% of direct labor cost, leaving Rs. 2,000 under applied which was closed to cost of goods sold account. Total marketing and administrative expenses amounting to 10% and 15% respectively of the gross sales.

Required:

(a) An Income statement for 2022, along with the details of Cost of goods manufactured and sold (10)
(b) A balance Sheet as on 31st December 2022. (10) **(20)**

Q. 8. A chemical factory manufactures three kinds of chemicals namely Eucalyptus oil, Hexachlorobenzen and Toxaphene. In the last week of December 2022, the records were:

Labor Grade	No of Employees	Rate per hour (Rs.)	Hours Worked by each employee
I	12	40	40
II	36	32	42
III	8	28	40
IV	2	16	44

Output and standard times during the same week were as follows:

Components	Output (In Units)	Standard Minutes for each unit
Eucalyptus oil	888	30
Hexachlorobenzen	1800	54
Toxaphene	960	66

Normal working hours per week are 38. Overtime is paid at the premium of 50 % of the normal hour rate.

Group Incentive Scheme:
A group incentive scheme is in operation. The time saved is expressed as a percentage of hours worked and is shared between the group as a proportion of the hours worked by each grade. The incentive rate is 75% of the normal hour rate.

Required: Prepare the payroll for the last week of December 2022 showing the basic pay, overtime **(20)** and incentive amount as separate totals for each grade of labor.

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

ACCOUNTANCY & AUDITING, PAPER-II

TIME ALLOWED: THREE HOURS	**PART-I (MCQS)**	**MAXIMUM MARKS = 20**
PART-I(MCQS): MAXIMUM 30 MINUTES	**PART-II**	**MAXIMUM MARKS = 80**

NOTE:
(i) Part-II is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II** by selecting at least **ONE** question from **EACH SECTION. ALL** questions carry **EQUAL** marks.
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(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.
(vii) Use of Calculator is allowed.

PART – II
SECTION – I (AUDITING)

Q. 2. Define professional skepticism and explain its key characteristics. Why should auditors act as though there is always a potential conflict of interest between the auditor and the management of the enterprise under audit? **(20)**

Q. 3. What are CAATs? What are some audit procedures that can be performed using CAATs? What advantages are derived from using CAATs in the financial statement audit? **(20)**

Q. 4. Define and explain the differences among several kinds of employee frauds that might occur at an audit client. **(20)**

SECTION – II (BUSINESS TAXATION)

Q. 5. a. Zia inherited certain assets from his father in the year 20x1. The fair market values of the assets on the date of inheritance were as follows:

	Rs.
25,000 shares of a private limited company	25,00,000
21,000 shares of public listed company	4,62,000
Membership card of Pakistan Stock Exchange	20,000,000
Jewelry	15,00,000

During the tax year 20x5, Zia undertook the following transactions:

1) He gifted some of the assets to his 20-year old son Ishaq. The detail and fair market values of the assets are as follows:

	Rs.
-----10,000 shares of a private limited company	2,000,000
-----10,000 shares of a public limited company	1,700,000
----- Membership card of Pakistan Stock Exchange	40,000,000

2) The remaining shares were sold as follows:

	Rs.
----- shares of a private limited company	3,000,000
----- shares of a public limited company	1,500,000

Ishaq sold all the assets transferred through gift in the same year. The assets fetched the following amounts:

	Rs.
-----10,000 shares of a private limited company	2,500,000
-----10,000 shares of a public limited company	1,500,000
----- Membership card of Pakistan Stock Exchange	55,000,000

Required:
(i) Based upon the above information, compute the taxable income of Zia and Ishaq for the tax year 20x5 **(10)**
(ii) Give a brief explanation for the items not included in the taxable income. **(10)** **(20)**

ACCOUNTANCY & AUDITING, PAPER-II

Q. 6. Explain the correct tax treatment in each of the following situations: **(20)**

1. Mr. Hamza made a total contribution of Rs. 150,000 as a donation to the approved institution mentioned in the 13th schedule. His total income from a business during the tax year 2023 is Rs. 1,800,000.

2. Nine years ago, Masood inherited a rare sculpture of Buddha which had a fair market value of Rs. 200,000 on the date of inheritance. In August 2022, the sculpture was sold by him at Rs. 500,000.

3. In June 2022, Imran entered into an agreement for the sale of the residential plot to Ibrahim, who paid an advance of Rs. 500,000. According to the agreement, Ibrahim was required to pay the balance by August 31, 2022. However, instead of paying the balance amount, he terminated the sale agreement. Imran forfeited the advance of Rs. 500,000 in accordance with the terms of the agreement.

4. In September 2022, Adnan sold his personal car, Toyota Corolla, to one of his cousins at the price of Rs. 500,000 whereas the fair market value of the car was Rs. 20,00,000. The car was purchased by him six years ago at of cost of Rs. 10,00,000.

5. Imran was working as a Chief Financial Officer in Dawood Pakistan (Pvt) Limited, which is a wholly owned subsidiary of Dawood AG, Germany. According to the Company's policy, Imran was sent on secondment to Germany on January 1, 2022, for a period of five years. During this period, half of his salary will be credited to his bank account in Pakistan, whereas the remaining portion will be received by him in Germany.

6. Maqsood provided consultancy services to a listed company. In consideration for his services, he received a net amount of Rs. 45,000 after a tax deduction of Rs. 5,000.

SECTION – III (BUSINESS STUDIES AND FINANCE)

Q. 7. Fitch Industries is in the process of choosing the better of two equal-risk, mutually exclusive capital expenditure projects, M and N. The relevant cash flows for each project are shown in the following table. The firm's cost of capital is 9%. **(20)**

	Project M	Project N
Initial investment-Cash Outflow	-$40,000	-$40,000
Year (t)	Cash inflows	Cash inflows
1	$14,000	$23,000
2	14,000	12,000
3	14,000	10,000
4	14,000	9,000

   i. Calculate each project's payback period.
   ii. Calculate the net present value (NPV) for each project.
   iii. Calculate the internal rate of return (IRR) for each project.
   iv. Summarize the preferences dictated by each measure you calculated, and indicate which project you would recommend. Explain why?

Q. 8. How have globalization and information technology created new opportunities for entrepreneurs? How does an aging population create opportunities for entrepreneurs? Describe current demographic trends that suggest new goods and services for entrepreneurial businesses. **(20)**

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT
AGRICULTURE & FORESTRY

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II** by selecting **TWO** questions from **EACH SECTION. ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.

PART-II
SECTION-A

Q. No. 2. Rural development has offered more scope under the urbanization trend in Pakistan. Discuss on the current scenario, issues, steps taken in past and your vision for the paradigm change in rural development. **(20)**

Q. No. 3. Integrated agriculture is an approach for sustainability of resources, profitability of farmers and economic growth of the country. Discuss the issues and solutions for the adoption of integrated agriculture in Pakistan. **(20)**

Q. No. 4. Give an overview of rainfed agriculture in Pakistan. Discuss the issues, opportunities and give an insight into the actions required in order to realize the full potential of these areas to contribute in overall performance of agriculture in Pakistan. **(20)**

Q. No. 5. Write short notes on the following: **(5-Each)** **(20)**
　　(a) Agricultural practices to slow down the climate change
　　(b) GMO and consequences
　　(c) Precision agriculture
　　(d) Failure of cotton crop in Pakistan

SECTION-B

Q. No. 6. Discuss on the degradation of old forests and values of the newly developed rangelands in Pakistan. Also describe your vision to conceive climate smart polices for forests sustainability. **(20)**

Q. No. 7. Rangelands have considerable role in agricultural economy of Pakistan. Explain different ways and means for integrated management of rangelands and livestock production keeping in view the climate change in Pakistan. **(20)**

Q. No. 8. Write short notes on any four of the following: **(5-Each)** **(20)**
　　(i) Laws of forests and wildlife in Pakistan.
　　(ii) Land reforms and its impact on agroforestry.
　　(iii) Wood based industries in Pakistan.
　　(iv) Social forestry and its value.
　　(v) Issues relating to Shesham and Eucalyptus
　　(vi) Watershed management

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

Roll Number

ANTHROPOLOGY

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
   (ii) Attempt **ONLY FOUR** questions from **PART-II. ALL** questions carry **EQUAL** marks.
   (iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
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PART-II

Q.No.2. Anthropology involves the comparison of different societies to understand the scope of human cultural diversity. Discuss the subject matter of anthropology and how anthropology is related to other disciplines in social sciences. **(20)**

Q.No.3. Economic system refers to the means by which a society produces, distributes and consumes resources. Discuss how anthropologists are different from other discipline in the study of economic organization. **(20)**

Q.No.4. All groups of people develop complexes of symbols, rituals, and beliefs that connect their own experience to the essential nature of the universe. Explain evolution and function of primitive religion as discussed by anthropologists. **(20)**

Q.No.5. How anthropologist define a social problem? Discuss the causes and consequences of political instability in Pakistan. **(20)**

Q.No.6. Discuss qualitative and quantitative research approaches appropriate for anthropological research. **(20)**

Q.No.7. Define Social Institution. Discuss the manifest and latent functions of family institution. **(20)**

Q.No.8. Define Religion. Discuss various anthropological approaches to the study of religion. **(20)**

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023 FOR RECRUITMENT
TO POSTS IN BS-17 UNDER THE FEDERAL GOVERNMENT

Roll Number

APPLIED MATHEMATICS

TIME ALLOWED: THREE HOURS	MAXIMUM MARKS = 100

NOTE: (i)   Attempt **ONLY FIVE** questions. **ALL** questions carry **EQUAL** marks
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   (v)   Extra attempt of any question or any part of the attempted question will not be considered.
   (vi) **Use of Calculator is allowed**.

Q. No. 1.   **(a)**   Forces of magnitudes P, 2P, 3P, 4P act respectively along the sides AB, BC, CD, **(10)**
DA of a square ABCD, of side a and forces each of magnitude $(8\sqrt{2})$ P act along
the diagonals BD, AC. Find the magnitude of the resultant force and the distance
of its line of action from A.

(b)   A uniform rod AB of length a and weight W is freely hinged to a vertical wall at A **(10)**
and is maintained in equilibrium by a light string of length a fastened to B and to a
point C at a distance b vertically above A. Prove that the reaction at the hinge A is

$$W \frac{\sqrt{(a^2 + 2b^2)}}{2b}$$

and find the tension in the string.

Q. No. 2.   **(a)**   Use Runge-Kutta method of order two to solve the following differential equation **(10)**
at x=1.2 by taking h=0.1
$$\frac{dy}{dx} = \frac{3x+y}{x+2y} \quad y(1) = 1.$$

(b)   Find the first and second derivatives of $f(x)$ at $x = 3$ from the following data using **(10)**
Newton's forward difference interpolation formula

x	3	3.5	4	4.5	5	5.5
$f(x)$	4.1023	5.1047	8.1971	9.1096	4.1122	6.1148

Q. No. 3.   **(a)**   Find the angle between the surfaces $x^2 + y^2 + z^2 = 9$ and $z = x^2 + y^2 - 3$ at the **(8)**
point $(2, -1, 2)$.

(b)   Show that **(6)**
$$\nabla r^n = nr^{n-2}r$$

(c)   Find the total work done in a moving particle in a force field given by **(6)**
$F = 3xy\, i - 5\, z\, j + 10\, x\, k$ along the curve $x = t^2 + 1, y = 2t^2, z = t^3$ from
$t = 1$ to $t = 2$.

Q. No.4.   **(a)**   A particle P moves in a plane in such a way that at any time t, its distance from a **(10)**
fixed point O is $r = a\, t + b\, t^2$ and the line connecting O and P makes an angle
$\theta = ct^{\frac{3}{2}}$ with a fixed line OA. Find the radial and transverse components of the
velocity and acceleration of the particle at $t = 1$.

(b)   Solve the following Bernouli's equation **(10)**
$$x\frac{dy}{dx} + y = \frac{1}{y^2}$$

Q. No. 5.   **(a)**   Solve the following differential equation **(10)**
$$x\, dy = (x\, sinx - y)\, dx$$

(b)   Find the general solution of the higher order differential equation **(10)**
$$y''' + 8y'' = -6\, x^2 + 9x + 2$$

APPLIED MATHEMATICS

Q. No. 6. **(a)** Find solution of $4y'' + y = 0$ in the form of power series in x. **(10)**

(b) Solve the following differential equation by variation of parameters **(10)**

$$y'' - 4y' + 4y = (x + 1)e^{2x}$$

Q. No. 7. **(a)** Find real root of the equation $2x - 3\sin(x) - 5 = 0$ up to 4 decimal places by secant method. **(10)**

(b) Solve the following system of equations by Guass Seidel method. Perform only five iterations. **(10)**

$$8x_1 - x_2 - x_3 = 6$$
$$x_1 + 6x_2 + x_3 = 8$$
$$x_1 - x_2 + 5x_3 = 5$$

Q. No. 8. **(a)** Expand $f(x) = \sin x$, $0 < x < \pi$, in a Fourier cosine series. **(10)**

(b) Use the method of separation of variables to find the solution of the following boundary value problem **(10)**

$$\nabla^2 u = \frac{\partial^2 u}{\partial x^2} + \frac{\partial^2 u}{\partial y^2} = 0, \qquad 0 \le x \le a, \qquad 0 \le y \le b$$
$$u_x(0, y) = 0, \quad u_x(a, y) = 0,$$
$$u_y(x, b) = 0, \quad u(x, 0) = f(x).$$

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023 FOR RECRUITMENT
TO POSTS IN BS-17 UNDER THE FEDERAL GOVERNMENT

Roll Number

APPLIED MATHEMATICS

TIME ALLOWED: THREE HOURS	MAXIMUM MARKS = 100

NOTE: **(i)** Attempt **ONLY FIVE** questions. **ALL** questions carry **EQUAL** marks
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(b) A uniform rod AB of length a and weight W is freely hinged to a vertical wall at A and is maintained in equilibrium by a light string of length a fastened to B and to a point C at a distance b vertically above A. Prove that the reaction at the hinge A is **(10)**

$$W\frac{\sqrt{(a^2 + 2b^2)}}{2b}$$

and find the tension in the string.

Q. No. 2. **(a)** Use Runge-Kutta method of order two to solve the following differential equation at x=1.2 by taking h=0.1 **(10)**
$$\frac{dy}{dx} = \frac{3x+y}{x+2y} \quad y(1) = 1.$$

(b) Find the first and second derivatives of $f(x)$ at $x = 3$ from the following data using Newton's forward difference interpolation formula **(10)**

x	3	3.5	4	4.5	5	5.5
$f(x)$	4.1023	5.1047	8.1971	9.1096	4.1122	6.1148

Q. No. 3. **(a)** Find the angle between the surfaces $x^2 + y^2 + z^2 = 9$ and $z = x^2 + y^2 - 3$ at the point $(2, -1, 2)$. **(8)**

(b) Show that **(6)**
$$\nabla r^n = nr^{n-2}r$$

(c) Find the total work done in a moving particle in a force field given by $F = 3xy\,i - 5\,z\,j + 10\,x\,k$ along the curve $x = t^2 + 1, y = 2t^2, z = t^3$ from $t = 1$ to $t = 2$. **(6)**

Q. No.4. **(a)** A particle P moves in a plane in such a way that at any time t, its distance from a fixed point O is $r = a\,t + b\,t^2$ and the line connecting O and P makes an angle $\theta = ct^{\frac{3}{2}}$ with a fixed line OA. Find the radial and transverse components of the velocity and acceleration of the particle at $t = 1$. **(10)**

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$$x\,dy = (x\,sinx - y)\,dx$$

(b) Find the general solution of the higher order differential equation **(10)**
$$y''' + 8y'' = -6\,x^2 + 9x + 2$$

APPLIED MATHEMATICS

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$$x_1 + 6x_2 + x_3 = 8$$
$$x_1 - x_2 + 5x_3 = 5$$

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(b) Use the method of separation of variables to find the solution of the following boundary value problem **(10)**

$$\nabla^2 u = \frac{\partial^2 u}{\partial x^2} + \frac{\partial^2 u}{\partial y^2} = 0, \qquad 0 \le x \le a, \qquad 0 \le y \le b$$
$$u_x(0, y) = 0, \quad u_x(a, y) = 0,$$
$$u_y(x, b) = 0, \quad u(x, 0) = f(x).$$

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

ARABIC

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**

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    (vi) Extra attempt of any question or any part of the question will not be considered.

Part – II

(20)   **سوال نمبر2 :** ما ذا تعرف عن الأدب الجاهلي؟ اذكر خصائص سبع المعلقات.

(20)   **سوال نمبر3 :** من هو الفرزدق؟ اكتب عن حياته ومميزاته الشعرية بالتفصيل.

(20)   **سوال نمبر4 :** تحدث عن أسباب ازدهار الشعر في العصر العباسي.

(20)   **سوال نمبر5 :** كيف تطور الرواية في العصر الحديث مع التركيز على روايات نجيب محفوظ.

(20)   **سوال نمبر 6 :** اكتب عن حياة أحمد شوقي ومميزاته الشعرية بالتفصيل.

(20)   **سوال نمبر7 :** اذكر مقالا موجزا عن الشاه ولي الله المحدث مع ذكر أعماله الأدبية.

(20)   **(05 marks each)**   **سوال نمبر8 :** اكتب شذرة على الموضوعات التالية :

ب- فن الخطابة في العصر الأموي   ا- النقد في الأدب العربي

د- ديوان الحماسة   ج- قس بن ساعدة

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT
BALOCHI

TIME ALLOWED: THREE HOURS	PART-I (MCQS) MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II MAXIMUM MARKS = 80

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**

(ii) Attempt **ONLY FOUR** questions from **PART-II**. Answer must be written **in respective language** except where specified in the question paper. **ALL** questions carry **EQUAL** marks.

(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.

(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.

(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.

(vi) Extra attempt of any question or any part of the question will not be considered.

PART-II

سوال نمبر2۔ بلوچی زبان میان اُستمانی {بین الاقوامی} زبانا چنکس اثرمند گُرتگ؟ نبشتہ کن اِت۔ (20)

سوال نمبر3۔ بلوچی کلاسیکی شاعریءَ شہداد ءُ مہناز ءِ داستان ءِ چے اَرزشت اِنت؟ نگدی دروشم ءَ نبشتہ کن اِت۔ (20)

سوال نمبر4۔ عطا شاد اے دَور ءَ بلوچی زبان ءِ مسترین شاعر گشگ بیت؟ اے بابت ءَ وتی حیالاں درشان کن اِت۔ (20)

سوال نمبر5۔ شئے مرید ءُ حانی ءِ عشقی داستان ءِ سرا سرجمیں نبشتانکے نبشتہ کن اِت۔ (20)

سوال نمبر6۔ دود ءُ ربیدگ {ثقافت} چے ءَ گُشنت؟ بلوچ دود ءُ ربیدگ ءِ جتائیں تَہرانی سرا نبشتانکے بنویس اِت۔ (20)

سوال نمبر7۔ رند ءُ لاشار ءِ نیام ءَ سی سالی ئیں جنگ ءِ پُشدر، تاوان ءُ آسر ءِ بابت ءَ سرجمیں نبشتانکے نبشتہ کن اِت۔ (20)

سوال نمبر8۔ جہل ءِ داتگیں بلوچی پیراگراف ءَ انگریزیءَ، ءُ انگریزی پیراگراف بلوچی ءَ رَجانک (20)
(الف)۔ کن اِت - **(10 each)**

بلوچ راج چو دُنیا ءِ ایدگہ راجانی ڈول ءَ یک کوہنیں زبان، دود ءُ ربیدگ ءُ بُن دپترے ءِ واہنداِنت۔مہر ءُ محبت، صبر و برداشت، مہمان ءُ مہمانداری بلوچ ءِ دود ءُ ربیدگ ءِ مستریں بہر اَنت۔ بلوچ چم کوہنیں زمانگ ءَ وتی پت ءُ پیرُکی دود ءُ رسمانی سر پَہر بند اَنت ءُ عمل کنگ ءِ جُہد کن اَنت۔ اے گپّ راست اِنت کہ مروچی باندا بازیں دود ءُ رسمانی تہا بدلی اَتکگ ، بلئے بلوچاں وتی گیشتریں دود کوہنیں دروشم ءَ داشتگ اَنت۔
(ب)۔ ءُ بازیں دود نوکیں رنگ ءُ دروشم ءَ ہم دیما آیان اَنت۔

Ever since the mid-20th century, there have been attempts to create a unified orthography (standard script) for the Balochi language. The development of written Balochi has mainly taken place in Pakistan, where there have been advocates of both the Arabic and Roman scripts. Most literature, of course has been written in Arabic script, but even here diverging systems have been used. Different writers and language developers have advocated different orthographic systems and some of the more prolific writers have also employed different systems over time.

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

BOTANY

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80

NOTE: (i) **Part-II** is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II**. **ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.

PART-II

Q. No. 2. Write comprehensive notes on the following: **(10 each)** **(20)**
    (a) Morphology of thallus in Algae
    (b) Alternation of generation in Bryophytes

Q. No. 3. Describe significance of various types of abiotic environmental factors for soil formation. Give soil characteristics formed by each agent. **(20)**

Q. No. 4. Describe ultra-stucture of nucleus with particular reference to nuclear membrane and pore complexes. **(20)**

Q. No. 5. Describe various types of environmental pollutions. Give significance of biodiversity and conservation to save the living planet. **(20)**

Q. No. 6. Give a diagrammatic account of location of the different photosystems in granum and briefly describe their functions in photosynthesis. **(20)**

Q. No. 7. What are different rules of botanical nomenclature? Compare natural and artificial system of classification. **(20)**

Q. No. 8. Write short notes on any **TWO** of the followings: **(10 each)** **(20)**

    (a) Reproduction and economic importance of yeast
    (b) Illustrative account of protein synthesis in eukaryotes
    (c) Endosperm development in Angiosperms

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT
BRITISH HISTORY

TIME ALLOWED: THREE HOURS	**PART-I (MCQS) MAXIMUM MARKS = 20**
PART-I(MCQS): MAXIMUM 30 MINUTES	**PART-II MAXIMUM MARKS = 80**

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
  (ii) Attempt **ONLY FOUR** questions from **PART-II** by selecting **TWO** questions from **EACH SECTION. ALL** questions carry **EQUAL** marks.
  (iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
  (iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
  (v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
  (vi) Extra attempt of any question or any part of the question will not be considered.

PART-II
SECTION-A

Q. No. 2. How did the Glorious Revolution occur in Britain? What was its fallout at home and abroad? **(20)**

Q. No. 3. "The English people got so much frightened by the developments in France that there prevailed a sort of panic across the country". Analyse the after-effects of the French Revolution on England. **(20)**

Q. No. 4. Why did Britain initiate the Policy of Splendid Isolation? What is your personal opinion whether it was a right step in right direction or proved detrimental? **(20)**

Q. No. 5. According to Rudyard Kipling, "however the world pretends to divide itself, there are only two divisions in the world today --- human beings and Germans". In the light of this statement, was the British policy in the First World War justified or not? Comment. **(20)**

SECTION-B

Q. No. 6. Produce an analytical essay on the causes, major developments, and aftermath of the Second World War. **(20)**

Q. No. 7. "We will find those who did it, we will smoke them out of their holes, we will get them running and we will bring them to justice". In the context of this remark, present a balanced critique about the War on Terror with special emphasis on the role of Great Britain. **(20)**

Q. No. 8. How did the global financial crisis plunge Britain into recession in the 21st century and how did it respond? **(20)**

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

BUSINESS ADMINISTRATION

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II. ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.

PART – II

Q. No. 2. Elaborate the theories of privatization. Discuss with example the impact of Downsizing on Telecommunication sector of Pakistan. **(20)**

Q. No. 3. How non-tariff barriers effect international business? Critically discuss with reference to Less Developed Countries. **(20)**

Q. No. 4. **a.** Supply chain managers should be aware of the characteristic of forecasting. Why or why not? Critically discuss in detail. **(20)**
b. Discuss the components of a forecast and forecasting methods with examples. Explain the role of information technology in forecasting.

Q. No. 5. Critically examine Foreign Direct Investment and the strategic logic behind it for the development of a country, especially for Pakistan. **(20)**

Q. No. 6. Discuss and evaluate the endeavors during past decades in Pakistan for the development of Islamic Economic System. **(20)**

Q. No. 7. Discuss the difference between theories of Herzberg and Maslow. Elaborate with reasons which of these theories do you prefer in Pakistani context? **(20)**

Q. No. 8. Discuss the following with examples with relation to services sector: **(5 each)** **(20)**

    (a) Management Information System
    (b) Globalization across different cultures
    (c) Meaning and importance of entrepreneurship
    (d) Reinventing Organizations

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

Roll Number

CHEMISTRY, PAPER-I

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80

NOTE: (i) **Part-II** is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II. ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.
(vii) **Use of calculator is allowed.**

PART-II

Q.2. (a) The following reaction occurs via two steps, where the first step is rate-determining step. (12)
Step I $NO_2(g) + NO_2(g) \rightarrow NO(g) + NO_3(g)$
Step II $NO_3(g) + CO(g) \rightarrow NO_2(g) + CO_2(g)$
    i. Write down the rate equation for the above reaction.
    ii. Which molecule acts as a catalyst in this reaction? Give a reason.
    iii. Which molecule is an intermediate in this reaction and justify it.
(b) Describe Arrhenius's equation. (8) **(20)**

Q.3. (a) An explosion is usually considered adiabatic, indicating negligible heat transfer, (10) even though it's rapidly expanding gaseous products are not at the same temperature as the surroundings, and the boundary permits heat transfer. Explain the phenomenon.
(b) Draw a working diagram for a reversible heat engine that operates with two (10) **(20)** isothermal steps and two constant-pressure steps. How many heat reservoirs are needed to operate this engine?

Q.4. (a) Describe Schrodinger Wave Equation for a particle in a three-dimensional box. (10)
(b) Explain photoelectric effect. (8)
(c) What is a wave function? Give Born's interpretation of wave function. (2) **(20)**

Q.5. (b) Describe Nernst's equation. (10)
(b) Describe the significance of pH, pK_a, and pK_b. (6)
(c) What is the relationship between conductance and Kohlrausch's law? (4) **(20)**

Q.6. (a) Describe three methods of mechanical phase separation. (10)
(b) Briefly discuss "The Hard-Soft Acid-Base Principle." (10) **(20)**

Q.7. (a) Compare Valence Bond Theory with Molecular Orbital Theory. (10)
(b) What is the oxidation state? Differentiate between the oxidation state and valency (6) /covalency of an element with suitable examples.
(c) Write the molecular orbital configuration of the followings: (4) **(20)**
O_2^+, O_2, O_2^- and O_2^{-2}

Q.8. Discuss the following in detail. **(5 each)** **(20)**
    i. Crystal Field Theory
    ii. Hess's Law
    iii. Electrophoresis Technique
    iv. Freundlich Adsorption Isotherm

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

CHEMISTRY, PAPER-II

TIME ALLOWED: THREE HOURS	**PART-I (MCQS) MAXIMUM MARKS = 20**
PART-I(MCQS): MAXIMUM 30 MINUTES	**PART-II MAXIMUM MARKS = 80**

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
   (ii) Attempt **ONLY FOUR** questions from **PART-II**. ALL questions carry **EQUAL** marks.
   (iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
   (iv) Candidate must write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
   (v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
   (vi) Extra attempt of any question or any part of the attempted question will not be considered.
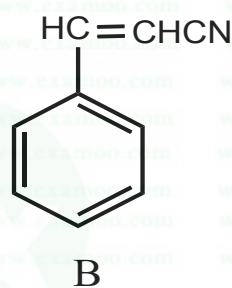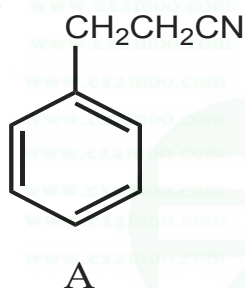   **(vii)** Use of calculator is allowed.

PART-II

Q. 2. **(a)** Arrange the following alkenes in order of their relative stability. How will you proceed to determine the order practically?   **(5)**
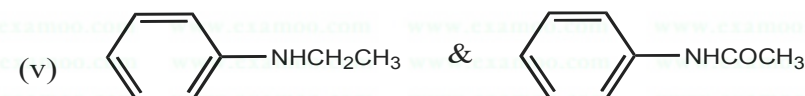
   i.   1-hexene
   ii.   cis-3-hexene
   iii.   trans-3-hexene
   (iv)   2-methyl-2-pentene
   (v)   2,3-dimethyl-2-butene

(b) Explain why?   **(5)**
   (i)   Poly substitution is a complicating factor in aromatic alkylation but not in aromatic nitration or halogenation.
   (ii)   A undergoes nitration predominantly at the ortho/ para positions but B mainly at meta position

CH_2CH_2CN $HC=CHCN$

A   **B**

(c) Compare the basicity of: **(5)**
   (i) $(CH_3)_3N$ & $(CCl_3)_3N$
   (ii) $C_6H_5CH_2NH_2$ & $CH_3C_6H_4NH_2$
   (iii)   Aniline   &   Cyclohexyl amine
   (iv) H_2N—⬡—CN   &   NC—⬡—NH_2
   (v)   ⬡—$NHCH_2CH_3$ &   ⬡—$NHCOCH_3$

**(d)** Explain why?   **(2.5 each)   (5)   (20)**
   (i)   Tertiary carbocation is more stable than primary.
   (ii)   Ethanol has higher boiling point than diethyl ether.

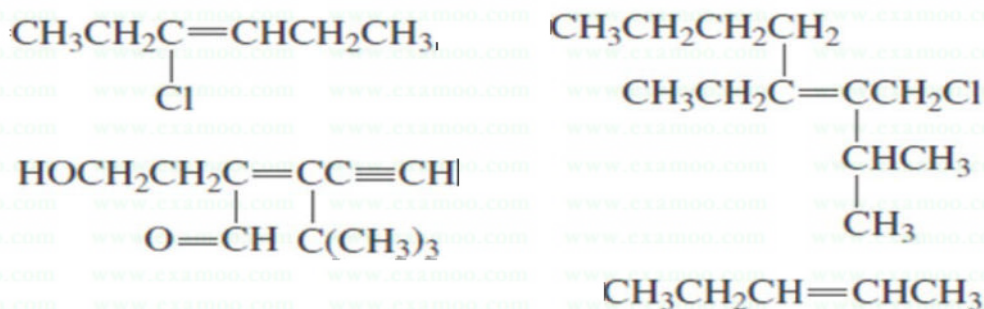**Q. 3.** **(a)** Write the structural formula for more stable conformation of each of the following compounds.   **(8)**

   a)   *trans*-1-Fluoro-3-methylcyclohexane,
   b)   *cis*-1-Iodo-4-methylcyclohexane
   c)   *cis*-1-*tert*-Butyl-4-methylcyclohexane,
   d)   *cis*-1,3,5-Trimethylcyclohexane

CHEMISTRY, PAPER-II

(b) Mention R & S configuration of the following compounds. **(5)**
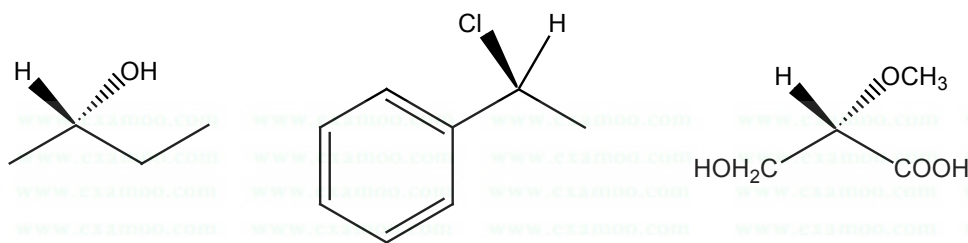
(c) <u>Draw and label the *E* and *Z* isomers for each of the following compounds.</u> **(5)**

$$CH_3CH_2C=CHCH_2CH_3,$$
$$|$$
$$Cl$$

$$HOCH_2CH_2C=CC\equiv CH|$$
$$| \quad |$$
$$O=CH \quad C(CH_3)_3$$

$$CH_3CH_2CH_2CH_2$$
$$|$$
$$CH_3CH_2C=CCH_2Cl$$
$$|$$
$$CHCH_3$$
$$|$$
$$CH_3$$

$$CH_3CH_2CH=CHCH_3$$

(d) Draw the structure of (Z)-3-isopropyl-2-heptene. **(2)** **(20)**

Q. 4. **(a)** In benzaldehyde, two of the ring protons have resonance at 7.87 ppm, and the other three **(4each) (20)** have resonance in the range from 7.5 to 7.6 ppm. Explain.

(b) Arrange the following protons in the decreasing order of their δ values in 1H-NMR and account for your order: Methyl, ethylenic, acetylenic, aryl and aldehydic.

(c) List the solvents most commonly used in IR spectroscopy. Why water and ethanol are not suitable solvents?

(d) The UV spectrum of acetone shows absorption maxima at 166, 189, and 279 nm. What type of transition is responsible for each of these bands?

(e) What types of electronic transitions are possible for each of the following compounds?

   (i) Cyclopentene,
   (ii) Acetaldehyde,
   (iii) Dimethyl ether,
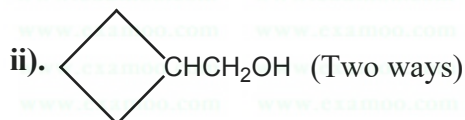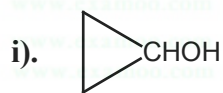   (iv) Methyl vinyl ether.

Q. 5. **(a)** Write down the reagents, conditions and mechanisms of the following reactions. **(10 each) (20)**
   i). Kolbe reaction.
   ii). Williamson synthesis
   iii). Dow Process
   iv). Reimer-Tiemann reaction
   v). Bromination of phenol

(b) Outline all steps involved in the synthesis of the following compounds from benzene or toluene, assuming that the ortho / para mixtures are separable.
   i). n-Butylbenzene
   ii). m-Nitrotoluene
   iii). p- Bromonitrobenzene
   iv). p- Bromobenzoic acid.
   v). 1,2-Dibromo-4-nitrobenzene

Q. 6. **(a)** Describe with equations all possible methods that can be used for the preparation of n-hexane. **(10)**

(b) Why Corey-House Method is more suitable as compared to Wurtz reaction for the synthesis of alkane. Explain with examples. **(5)**

(c) Draw the structures of following compounds and label them with IUPAC systematic rules. **(5)** **(20)**

    i). 3-cyclopentylhexane
    ii). 2-cyclobutyl-3-methylpentane
    iii). Isopropylcyclodecane
    iv). 2-methylbicyclo [3.2.0] heptanes
   v). 8-methylbicyclo [3.2.1] octane

**Q. 7.** **(a)** How can you prepare each of the following substances by a reaction involving Grignard **(5)** reagent?

    i). $\triangleright$CHOH

    ii). $\diamond$CHCH$_2$OH (Two ways)

    iii). $(CH_3)_3CD$

    iv). $CH_3CH_2CHOHCH_3$ (Two ways)

    v). $(CH_3CH_2)_3COH$ (Three ways)

(b) How will you bring about the following conversions? **(5)**

    i $CH_3CHBrCH_2COOC_2H_5 \longrightarrow HOOCCH_2CH(CH_3)CH_2COOH$

    ii $CH_3CH(COOC_2H_5)_2 \longrightarrow HOOCH_2CH(CH_3)CH_2COOH$

(c) How would you synthesize each of the following compounds by the Reformatsky **(5)** reaction?

    i). $H_3C-CH_2-CH_2-\overset{O}{\underset{H_2}{C}}-C-CH_2-CH_3$

    ii).
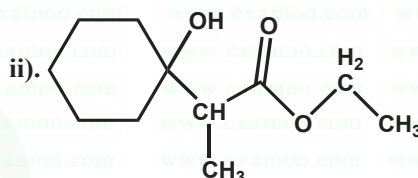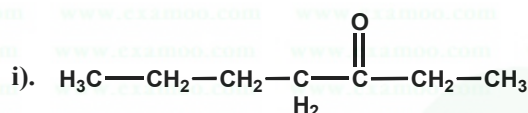
(d) How would you synthesize each of the following compounds by the Wittig reaction? **(2.5)**

    i). $C_6H_5C=CH_2$ (with CH_3 substituent)
    ii). $C_6H_5CH=CHC_6H_5$
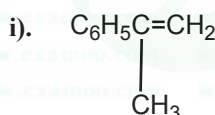
(e) How will you synthesize each of the following substances by an actoacetic ester synthesis? **(2.5)** **(20)**

    i. 3,4-dimethyl-2,5-hexanedione
    ii. 3-acetyl-5-hexanoic acid.
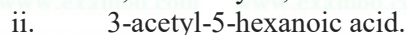
Q. 8. **(a)** Discuss the following topics. **(6 each)** **(12)**

    1. Prostaglandins
    2. Terpenes

(b) Name the epimers of d-glucose. **(4)**

(c) Clearly represent the most stable conformation of the -pyranose form of each of the **(4)** **(20)** following sugars.

    (a) D-Galactose
    (b) D-Mannose
    (c) L-Mannose
    (d) L-Ribose

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION - 2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT
COMPARATIVE STUDY OF MAJOR RELIGIONS
(FOR NON MUSLIMS)

TIME ALLOWED: THREE HOURS	**PART-I (MCQS)** **MAXIMUM MARKS = 20**
PART-I(MCQS): MAXIMUM 30 MINUTES	**PART-II** **MAXIMUM MARKS = 80**

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II**. **ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.

PART-II

Q. No. 2. Explain in detail the significance of the Buddhist Sanga Council as well as the Panja and Dasa Silas (Ethical Teachings). **(20)**

Q. No. 3. Describe the Christian doctrines in detail with the reforming services of St. Paul in these doctrines. **(20)**

Q. No. 4. Describe in detail the sacred literature of Hinduism. **(20)**

Q. No. 5. Explain the caste system of Hinduism and the different stages of life (ashram). **(20)**

Q. No. 6. Give an explanation of the doctrine of atonement, giving a brief explanation of the doctrines of Christianity. **(20)**

Q. No. 7. Introduce Judaism and discuss their Doctrine (Thirteen Principles of Moses Bin Mammon). **(20)**

Q. No. 8. Explain in detail any one of the following: **(20)**

    (i)   Zionism: History and Creeds.
    (ii)   Belief in the end of Prophet hood/ عقیدہ ختمِ نبوت

URDU VERSION

سوال
نمبر 2: بدھ سَنگا کونسل کی اہمیت نیز پنجہ اور دسہ سِلہ(نظامِ اخلاق) پر روشنی ڈالیں۔ (20)

سوال
نمبر 3: مسیحی عقائد کو تفصیلاً بیان کر کے سینٹ پال کی ان عقائد میں ترمیمی خدمات پیش (20)
کریں ۔

سوال
نمبر4: ہندومت کے مقدس لٹریچر کو تفصیلاً بیان کریں۔ (20)

سوال
نمبر5: ہندومت کے طبقاتی نظام (Caste System) اور زندگی گزارنے کے مختلف مراحل (اشرم) (20)
کی وضاحت پیش کریں ۔

سوال
نمبر 6: مسیحیت کے عقائد پر مختصر روشنی ڈال کر ، عقیدہ کفارہ کی وضاحت پیش کریں ۔ (20)

سوال
نمبر 7: یہودیت کا تعارف اور بنیادی عقائد (Thirteen Principles of Moses Bin Mammon) کی (20)
وضاحت کریں۔

سوال
نمبر 8: درج ذیل میں سے کسی ایک پر تفصیلی نوٹ لکھیں: (20)

(الف)۔ صیہونیت : تاریخ اور عقائد (ب)۔ عقیدہ ختم نبوت

FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023 FOR RECRUITMENT TO POSTS IN BS-17 UNDER THE FEDERAL GOVERNMENT
COMPUTER SCIENCE, PAPER-I

TIME ALLOWED: THREE HOURS	**PART-I (MCQS)**	**MAXIMUM MARKS = 20**
PART-I(MCQS): MAXIMUM 30 MINUTES	**PART-II**	**MAXIMUM MARKS = 80**

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
    (ii) Attempt **ONLY FOUR** questions from **PART-II**, by selecting **TWO** questions from **EACH SECTION. ALL** questions carry **EQUAL** marks.
    (iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
    (iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
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PART-II
SECTION-A

Q. No. 2. **(a)** Write a detailed note on any 03 Super Computing Technologies being used in the world. List key characteristics in each case. **(8)**

(b) What performance metrics are used to analyze the capacity of Super Computers? Discuss. **(6)**

(c) Discuss the role of Web Crawling, Indexing & Searching operations for a Search Engine. **(6)**

Q. No. 3. **(a)** How does dynamic memory allocation is managed programmatically in a C++ program? Clarify yours understanding through a viable program. **(8)**

(b) Write a note on the use of overloaded operators. Discuss with examples. **(6)**

(c) What is bit twiddling? Give brief description. **(6)**

Q. No. . **(a)** What is Polymorphism? Explain Ad-Hoc Polymorphism, Parametric Polymorphism & Subtyping with suitable coding examples. **(8)**

(b) Discuss Late Binding with a short program. **(6)**

(c) Differentiate between Abstraction & Encapsulation. **(6)**

SECTION-B

Q. No. 5. **(a)** For analyzing an Algorithm theoretically & asymptotically, give a detailed note on Input size, unit of time & order of growth. Support your answer with appropriate mathematical equations. **(8)**

(b) Briefly describe the four types of analysis we may perform to evaluate the asymptotic behavior of an algorithm. **(6)**

(c) Evaluate order of growth of the functions given below. Compare & write down which one has higher, same or lower order of growth than the other one: **(6)**

    I. $n(n+1)$ and $2000n^2$ II. $100n^2$ and $0.01n^3$
    III. $Log^2 n$ and $\ln n$ IV. 2^{n-1} and 2^n
    V. $(n-1)!$ and $n!$

Q. No. 6. **(a)** Discuss the architecture of aspect-oriented system. **(8)**

(b) Briefly discuss the motivation for aspect-oriented programming. **(6)**

(c) Briefly describe 05 agile software development frameworks. **(6)**

COMPUTER SCIENCE, PAPER-I

Q. No. 7.   **(a)**   Design and draw a finite automaton to recognize the regular language of all strings   **(8)**
that contain the string '001' as a substring.

(b)   Consider the following state diagram and extract the standard information, i.e., Q, Σ,   **(6)**
q_0, F and δ.
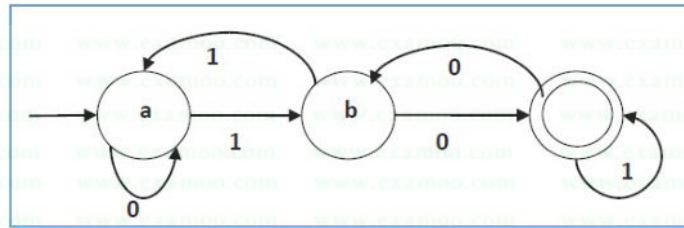
(c)   How would you optimize a loop? Describe the techniques briefly.   **(6)**

Q. No. 8.   **(a)**   Discuss the role of Syntax Tree in representing formal text structure. Develop a   **(8)**
Syntax Tree structure for the following piece of code:

```
while b ≠ 0
    if a > b
        a = a - b;
    else
        b = b - a;
return a;
```

(b)   Describe your understanding on Constant Folding using a brief pseudo code.   **(6)**

(c)   What is an Optimization problem? What are its 02 general categories? Write down   **(6)**
mathematical representation of a standard optimization problem.

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023 FOR RECRUITMENT TO
POSTS IN BS-17 UNDER THE FEDERAL GOVERNMENT

Roll Number

COMPUTER SCIENCE, PAPER-II

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80

NOTE: (i) **Part-II** is to be attempted on the separate **Answer Book.**
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(iv) Candidate must write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
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PART – II (SECTION – A)

Q. 2. **(a)** Suggest reasons why RAMs traditionally have been organized as only one bit per chip whereas ROMs are usually organized with multiple bits per chip. (7)

(b) Consider a dynamic RAM that must be given a refresh cycle 64 times per ms. Each refresh operation requires 150 ns; a memory cycle requires 250 ns. What percentage of the memory's total operating time must be given to refreshes? (7)

(c) In the context of RAID, what is the distinction between parallel access and independent access? (6) **(20)**

Q. 3. **(a)** The CPU in a router can process 2 million packets/sec. The load offered to it is 1.5 million packets/sec. If a route from source to destination contains 10 routers, how much time is spent being queued and serviced by the CPUs? (7)

(b) An IP datagram using the strict source routing option has to be fragmented. Do you think the option is copied into each fragment, or is it sufficient to just put it in the first fragment? Explain your answer. (7)

(c) Give two examples of computer applications for which connection-oriented service is appropriate and also give two examples for which connection-less service is best. (6) **(20)**

Q. 4. **(a)** A 32-bit computer has two selector channels and one multiplexor channel. Each selector channel supports two magnetic disk and two magnetic tape units. The multiplexor channel has two line printers, two card readers, and ten VDTs terminals connected to it. Assume the following transfer rates. (12)

> Disk drive 800 Kbytes/s
> Magnetic tape drive 200 Kbytes
> Line printer 6.6 Kbytes/s
> Card Reader 1.2 Kbytes/s
> VDT 1 Kbytes/s

Estimate the maximum aggregate I/O transfer rate in this system.

(b) Consider a program that access a single I/O device and compare un- buffered I/O to the use of a buffer. Show that the use of buffer can reduce the running time by at most a factor of two. (8) **(20)**

Q. 5. **(a)** An I/O -bound program is one that, if run alone, would spend more time waiting for I/O than using the processor. A processor-bound program is the opposite. Suppose a short term scheduling algorithm favors those programs that have used little processor time in the recent past. Explain why this algorithm favors I/O bound programs and yet does not permanently deny processor time to processor-bound programs? (10)

(b) Suppose that instead of using 16-bits for the network part of a class B address originally, 20 bits had been used. How many class B networks would there have been? (5)

(c) What is the distinction between instruction-level parallelism and machine parallelism? (5) **(20)**

COMPUTER SCIENCE, PAPER-II

(SECTION – B)

Q. 6. **(a)** Explain the following different SELECT statement search conditions with examples using any database schema of your choice: (12)
1. Compound Comparison Search Condition
2. Range search condition (BETWEEN/NOT BETWEEN)
3. Set membership search condition (IN/NOT IN)
4. Pattern match search condition (LIKE/NOT LIKE)

(b) Explain ACID property of a transaction (4)

(c) Explain Transitive dependency using any example. (4) **(20)**

Q. 7. **(a)** A common measure of transmission for digital data is the baud rate, defined as the number of bits transmitted per second. Generally, transmission is accomplished in packets consisting of a start bit, a byte (8 bits) of information, and a stop bit. Using these facts, answer the following: (10)

- How many minutes would it take to transmit a 1024 ×1024 image with 256 intensity levels using a 56k baud modem?
- What would the time be at 750K baud, are representative speed of a phone DSL (Digital subscriber line) connection?

(b) What effect would setting to zero the lower-order bit planes have on the histogram of an image in general? (5)

(c) What would be the effect on the histogram if we set to zero the higher order bit planes instead? (5) **(20)**

Q. 8. **(a)** How SEO improves your website traffic? Explain with proper reasons and coding examples. (8)

(b) Suppose your web team is going to make a contract with the customer and you need to estimate the cost of application development. What pricing factors you consider to estimate the cost? (8)

(c) Write the jQuery code to slide elements up and down. Use HTML, CSS, and jQuery (4) **(20)**

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

Roll Number

CONSTITUTINAL LAW

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
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(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
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PART – II

Q. 2. Discuss the constitutional background of the theory of, "Separation of Powers". Elaborate your answer with special reference to the US Constitution. **(20)**

Q. 3. Under the Constitution of Pakistan, 1973, the president has the power to issue a proclamation of emergency. Explain the emergency provisions mentioned in the Constitution of 1973. **(20)**

Q. 4. Like other democratic countries, the United Kingdom strongly believes in the independence of judiciary. Elaborate the important principles for the independence of judiciary in the British Constitutional Law. **(20)**

Q. 5. To enjoy the protection of law and to be treated in accordance with the law is the inalienable right of every citizen without any sort of discrimination. Discuss the statement in the light of the Constitution of Pakistan, 1973. **(20)**

Q. 6. The era of 1954 and 1955 in Pakistan can be rightly called, "The Era of Legal Battles". Following this, explain the Moulvi Tamizuddin Khan's case in minute details. **(20)**

Q. 7. The Legal Framework Order 2002 was promulgated on 21st August, 2002.Enumerate the important features of LFO 2002. **(20)**

Q. 8. Write notes on any two of the following: **(10 each)** **(20)**

    (a) Appointment of the Chief Election Commissioner of Pakistan
    (b) Composition of the Federal Shariat Court
    (c) Jurisdiction of the High Court

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

CRIMINOLOGY

TIME ALLOWED: THREE HOURS	**PART-I (MCQS) MAXIMUM MARKS = 20**
PART-I(MCQS): MAXIMUM 30 MINUTES	**PART-II MAXIMUM MARKS = 80**

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II** by selecting **ONE** question from **EACH SECTION. ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
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(vi) Extra attempt of any question or any part of the question will not be considered.

PART – II
SECTION-I

Q. No. 2. Discuss scope of Criminology as science dealing with study of criminal law, forensics and criminal investigation. **(20)**

Q. No. 3. Suggest Measures to control robberies/dacoities and urban street criminality in Pakistan? **(20)**

SECTION-II

Q. No. 4. How juvenile delinquency can be reduced through institutional role, professional counseling and increased care? **(20)**

Q. No. 5. What challenges are faced by police in controlling crime and maintaining law and order in the country? **(20)**

SECTION-III

Q. No. 6. Why crime scene is important for investigators? What are the crime scene search patterns? **(20)**

Q. No. 7. How international policing and monitoring organizations control human trafficking? **(20)**

SECTION-IV

Q. No. 8. 'Terrorism and radicalization continue to pose threat to global peace, economy and stability'. Discuss. **(20)**

Q. No. 9. What is the role of FIA in controlling organized criminality in Pakistan? **(20)**

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT
ECONOMICS, PAPER-I

TIME ALLOWED: THREE HOURS	**PART-I (MCQS)**	**MAXIMUM MARKS = 20**
PART-I(MCQS): MAXIMUM 30 MINUTES	**PART-II**	**MAXIMUM MARKS = 80**

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II**. **ALL** questions carry **EQUAL** marks.
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(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
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PART-II

Q. No. 2. Is the slope of an indifference curve at a particular point known as the marginal rate of substitution (MRS)? Justify your answer with a graph. If good 1 is a 'neutral', what is its MRS for good 2? **(20)**

Q. No. 3. Define opportunity costs and explain why the economic definition of profit requires that we value all inputs and the outputs at their opportunity cost? **(20)**

Q. No. 4. Briefly describe the functions of International Monetry Fund (IMF). How does the IMF help countries trapped in financial issues? **(20)**

Q. No. 5. The central bank in a country is responsible for its monetary policy. What are the objectives and tools of monetary policy? Use diagrams to explain your answer. **(20)**

Q. No. 6. What is the theory of liquidity preferences? How does it explain the downward slope of the aggregate-demand curve? Use the theory of liquidity preference to explain how a decrease in the money supply affects the aggregate-demand curve in a closed economy. **(20)**

Q. No. 7. Considering the current economic scenario of our economy, recommend an effective policy framework that can reduce budget deficit and improve the developmental outlook. **(20)**

Q. No. 8. Write short notes on any **FOUR** of the following: **(5 each) (20)**

    a. Public Goods
    b. Draw self-explanatory functions of: MPC, Aggregate demand, Multiplier
    c. Cost minimization by a small firm.
    d. Two methods of national income accounting.
    e. Fuel poverty
    f. Welfare economics

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT
ECONOMICS, PAPER-II

Roll Number

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
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PART-II

Q. No. 2. What is green revolution? How would you explain that it proved an engine of growth rather than development? **(20)**

Q. No. 3. Explain the difference between growth and development. **(20)**

Q. No. 4. Differentiate between appreciation and depreciation of currency and how it affect trade/economy. **(20)**

Q. No. 5. Explain the relationship between unemployment and inflation through Philips curve. **(20)**

Q. No. 6. Differentiate between Absolute advantage and comparative advantage. **(20)**

Q. No. 7. How comparative advantage becomes the basis of international trade between the two nations. **(20)**

Q. No. 8. Write short notes on any TWO of the following: **(10 each) (20)**

   (i) Globalization and economic growth and development.

   (ii) Social media and its merits and demerits on Pakistan society and economy.

   (iii) Factor of productions and two sectors flow diagram of economy.

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT
ENGLISH LITERATURE

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
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PART-II

Q. No. 2. Is happiness possible in modern world? Explain in the light of Russell's The Conquest of Happiness. **(20)**

Q. No. 3. Explain Jacque Derrida's Deconstruction theory. Do you agree that Deconstruction is not destruction? **(20)**

Q. No. 4. What is the title significance of "The Lotus Eater" by Somerset Maugham? **(20)**

Q. No. 5. Is there a significant relation between language and political thought? Explain rules of writing a good prose in the light of Orwell's "Politics and the English Language". **(20)**

Q. No. 6. Discuss emotional conflicts in Paul Morel the protagonist having a stifle connection with a tough mother in D.H. Lawrence "Sons and Lovers". **(20)**

Q. No. 7. "It is we", says Hazlitt, "who are Hamlet". Illustrate with textual examples Hamlet as a universal character. **(20)**

Q. No. 8. Marxists and Sociologists believe literature as an expression of society. Explain this statement. Also enlist limitations of Marxist criticism in detail. **(20)**

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT
ENVIRONMENTAL SCIENCE

TIME ALLOWED: THREE HOURS	**PART-I (MCQS)**	**MAXIMUM MARKS = 20**
PART-I(MCQS): MAXIMUM 30 MINUTES	**PART-II**	**MAXIMUM MARKS = 80**

NOTE: (i) **Part-II** is to be attempted on the separate **Answer Book.**
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PART-II

Q. No. 2. Discuss in detail the salient features of Pakistan environmental protection act 1997. **(20)**

Q. No. 3. Discuss in detail the climate mitigation and adaptation strategies keeping in view the climate change risk index of Pakistan. **(20)**

Q. No. 4. What are the effects of Environmental Pollution and Habitat loss on Global Diversity? Explain in detail. **(20)**

Q. No. 5. What are sustainable approaches for solid waste management? **(20)**

Q. No. 6. What are the main causes of Biodiversity loss? How can we protect and preserve Biodiversity? **(20)**

Q. No. 7. What is sustainable development? Describe its goals and why it is often associated with protecting the environment? **(20)**

Q. No. 8. Write notes on any TWO of the following: **(10 each) (20)**
    (i) Kyoto Protocol
    (ii) Geographic Information and Remote Sensing
    (iii) Occupational Health and Safety Management System

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

EUROPEAN HISTORY

TIME ALLOWED: THREE HOURS	**PART-I (MCQS)** **MAXIMUM MARKS = 20**
PART-I(MCQS): MAXIMUM 30 MINUTES	**PART-II** **MAXIMUM MARKS = 80**

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
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PART – II
SECTION-I

Q. No. 2. What was the continental system and why did Napoleon try to enforce it after 1806? Why did he fail? Explain. **(20)**

Q. No. 3. Discuss the attempts made by Metternich to control the German confederation between 1815 to 1848. Why did revolutionary outbreak fail? Explain with details. **(20)**

Q. No. 4. "Thirty lost years" Is this a fair assessment of the reign of Nicholas I of Russia (1825-1855)? Give reasons. **(20)**

Q. No. 5. "Italy was unified by improvisation rather than calculation". Analyze comprehensively. **(20)**

SECTION-II

Q. No. 6. Why did the European war of 1939 become the World War of 1941? Give reasons to support your answer. **(20)**

Q. No. 7. The soviet invasion on Ukraine in 2022 is the beginning of another era of cold war. Analyze the statement with reasons. **(20)**

Q. No. 8. Write comprehensive notes on any **TWO** of the following: **(10 each)** **(20)**

    (a) Foreign policy of Bismarck between 1871 to 1890.
    (b) Problems of Habsburg Monarchy 1815-1848.
    (c) United Nations succeeded in peace keeping but not quite. Analyze.

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT
GENDER STUDIES

TIME ALLOWED: THREE HOURS	PART-I (MCQS) MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II MAXIMUM MARKS = 80

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
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PART-II

Q. No. 2. Write a note on status of gender studies in Pakistan. Give your views on the autonomy verses integration debate in gender studies. **(20)**

Q. No. 3. Differentiate between gender studies and women's studies. Discuss in detail the multidisciplinary nature of gender studies. **(20)**

Q. No. 4. Define the terms masculinity and femininity. In your opinion where do traditional gender roles come from? **(20)**

Q. No. 5. Outline and explain the three major waves of feminist movements in the West. Discuss the influence of these waves on feminist movements in Pakistan. **(20)**

Q. No. 6. Write a detailed note on the colonial and capitalistic perspectives of gender. **(20)**

Q. No. 7. Elucidate the current health status of women in Pakistan. What measures could be taken to improve the women's status as a whole? Support your arguments with suitable examples. **(20)**

Q. No. 8. Define gender based violence. Explain various forms of violence against women in Pakistan and devise some practical strategies which can be helpful in the eradication of gender based violence from our society. **(20)**

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

GEOGRAPHY

TIME ALLOWED: THREE HOURS	**PART-I (MCQS)**	**MAXIMUM MARKS = 20**
PART-I(MCQS): MAXIMUM 30 MINUTES	**PART-II**	**MAXIMUM MARKS = 80**

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
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PART – II
SECTION – I

Q. No. 2. Differentiate between global warming and ozone depletion. Briefly describe the causes and effects of ozone depletion and global warming. **(20)**

Q. No. 3. Discuss the processes of wind-driven and thermo-haline circulation of oceanic water. How are surface oceanic currents affected by global winds movements? **(20)**

Q. No. 4. Describe the formation of a floodplain. How are alluvial terraces, natural levees, oxbow lakes, and backswamps produced? **(20)**

Q. No. 5. What is subduction zone? How does the theory of plate tectonics explain the formation of the Andes mountain range? **(20)**

SECTION – II

Q. No. 6. What is commercial farming? Discuss the importance of the steppe grassland region of Russia-Ukraine in producing commercial grain farming and supply of wheat in the global food market. **(20)**

Q. No. 7. Describe least cost industrial location theory of Weber. Discuss the affecting factors of industrial location, particularly concerning sugar and cement industries. **(20)**

Q. No. 8. Distinguish between material and non-material elements of culture. Discuss cultural traits of nomadic culture and sedentary culture. **(20)**

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

GEOGRAPHY

TIME ALLOWED: THREE HOURS	**PART-I (MCQS)**	**MAXIMUM MARKS = 20**
PART-I(MCQS): MAXIMUM 30 MINUTES	**PART-II**	**MAXIMUM MARKS = 80**

NOTE: (i) **Part-II** is to be attempted on the separate **Answer Book.**
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PART – II
SECTION – I

Q. No. 2. Differentiate between global warming and ozone depletion. Briefly describe the causes and effects of ozone depletion and global warming. **(20)**

Q. No. 3. Discuss the processes of wind-driven and thermo-haline circulation of oceanic water. How are surface oceanic currents affected by global winds movements? **(20)**

Q. No. 4. Describe the formation of a floodplain. How are alluvial terraces, natural levees, oxbow lakes, and backswamps produced? **(20)**

Q. No. 5. What is subduction zone? How does the theory of plate tectonics explain the formation of the Andes mountain range? **(20)**

SECTION – II

Q. No. 6. What is commercial farming? Discuss the importance of the steppe grassland region of Russia-Ukraine in producing commercial grain farming and supply of wheat in the global food market. **(20)**

Q. No. 7. Describe least cost industrial location theory of Weber. Discuss the affecting factors of industrial location, particularly concerning sugar and cement industries. **(20)**

Q. No. 8. Distinguish between material and non-material elements of culture. Discuss cultural traits of nomadic culture and sedentary culture. **(20)**

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023 FOR RECRUITMENT TO POSTS IN BS-17 UNDER THE FEDERAL GOVERNMENT

Roll Number

GOVERNANCE AND PUBLIC POLICIES

TIME ALLOWED: THREE HOURS	**PART-I (MCQS)**	**MAXIMUM MARKS = 20**
PART-I(MCQS): MAXIMUM 30 MINUTES	**PART-II**	**MAXIMUM MARKS = 80**

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II**. **ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.

PART-II

Q. 2. Theories of Governance provide an intellectual base to formulate sound Public Policies. In this context, elaborate:- **(20)**
    (a) What are the Governance Theories more applicable to developing countries like Pakistan and how those could be applied?
    (b) How would you differentiate between Classical and New Public Administration approach? Relate those with Postmodern Public Administration relevant to Pakistan?

Q. 3. What is Good Governance and how it is different in Private and Public Sectors? Elaborate seven good Governance Indicators. Also indicate where Pakistan stands in those indicators. **(20)**

Q. 4. Quaid-e-Azam M. A. Jinnah viewed governance as mechanism for social justice and fair play to all; in that context explain: **(20)**
    (a) What was his vision of governance in Pakistan and how he intended to implement it?
    (b) What was his approach towards functioning of the State Institutions in relation with matters of Legislative, Executive and Judiciary?

Q. 5. There has been fluctuating (declining mostly) economic growth of Pakistan especially since 1990s, adversely impacting governance and social development. In this context, answer the following: **(20)**
    (a) How Incompatible Economic Growth has impacted the middle and poor segment of the society? Relate it with governance issues.
    (b) What kind of Financial Discipline do you suggest for Pakistan including accountability and safeguards against malpractices?

Q. 6. Equality and fair-play in socio-political activities form the basis of Islamic Philosophy of Governance and public administration. In this context, elaborate: **(20)**
    (a) What obligations, Islamic Concept of Governance and Public Services place on the Public Servants?
    (b) How personal accountability impacts community growth and social order in character and integrity?

Q. 7. What do you understand of Ethics in politics? How public policies become an instrument of political gains by those in power especially in countries like Pakistan? Under the situation of political tug of war, what roles do you idealize for the civil servants to keep the public interest at forefront? **(20)**

Q. 8. Write short notes on any five of the following: **(4 each) (20)**
    (a) Distinctive features of Governance, Administration and Management.
    (b) Reforms and restructuring required in civil bureaucracy of Pakistan
    (c) Success criteria of local governments for Pakistan including political restructuring.
    (d) Public Policies in dealing with the World Bank and IMF, lessons for the developing countries
    (e) Merits, demerits and choice of Privatization, Deregulations and Liberalization in Pakistan.
    (f) Success factors for Public-Private Partnerships in the scenario of Pakistan
    (g) Presidential versus Parliamentary form of government in Pakistan

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT
HISTORY OF PAKISTAN & INDIA

TIME ALLOWED: THREE HOURS	PART-I (MCQS) MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II MAXIMUM MARKS = 80

NOTE:
(i) **Part-II** is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II**. **ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.

PART-II

Q. No. 2. Write a detailed note on the public administration under Muslim rule in India. **(20)**

Q. No. 3. Critically examine the origin and growth of the East India Company as an imperialist power in India. **(20)**

Q. No. 4. Give an historical account of the growth of Hindu nationalism during 1858-1947. **(20)**

Q. No. 5. Evaluate the causes and effects of the Khilafat Movement on the Muslim struggle for independence. **(20)**

Q. No. 6. Discuss the outcomes of the three sessions of the Round Table Conference. **(20)**

Q. No. 7. Critically evaluate the role of political parties in the separation of East Pakistan in 1971. **(20)**

Q. No. 8. Write short notes on any TWO of the following. **(10 each)** **(20)**

    a) Kargil War
    b) 1984 Referendum
    c) Allahabad Address 1930

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT
HISTORY OF USA

TIME ALLOWED: THREE HOURS	**PART-I (MCQS) MAXIMUM MARKS = 20**
PART-I(MCQS): MAXIMUM 30 MINUTES	**PART-II MAXIMUM MARKS = 80**

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
    (ii) Attempt **ONLY FOUR** questions from **PART-II ALL** questions carry **EQUAL** marks.
    (iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
    (iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
    (v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
    (vi) Extra attempt of any question or any part of the question will not be considered.

PART-II

Q. No. 2. Discuss the role & significance of geopolitical features of Northwest Passage and Middle Passage in shaping the history of the US. **(20)**

Q. No. 3. Why did President Andrew Jackson sign the Indian Removal Act for the exchange of land? Elaborate with rational arguments. **(20)**

Q. No. 4. How the nativist thoughts formed the Know-Nothing political party and became a strong public voice in US? Explain with examples. **(20)**

Q. No. 5. Discuss in detail the mainstream agenda of Theodore Roosevelt's domestic-level Square Deal program. **(20)**

Q. No. 6. Discuss in detail how the Iroquoian people and their cultural traits are associated with early American history. **(20)**

Q. No. 7. How the strict-constructionist ideas of Jefferson and the loose-constructionist thoughts of Hamilton created major debates in domestic US politics? Provide comprehensive arguments. **(20)**

Q. No. 8. Write short notes on any TWO of the following; **(10 each)** **(20)**
    (a) Missionary Diplomacy
    (b) New Nationalism
    (c) Border Ruffians

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT
INTERNATIONAL LAW

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II**. **ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.

PART – II

Q. No. 2. "States continue to be the principal subjects of international legal relations but non-state entities to exert a great deal of influence on the legal system". Examine the statement with reference to rights and duties of international organizations under the law. **(20)**

Q. No. 3. Territory is undoubtedly the basic characteristic of a state as well as the most widely accepted and understood – elaborate with reference to the exclusive rights of states on land and air territory. **(20)**

Q. No. 4. Does the customary International Law grant the right to use force to a state in response to a terrorist attack on it? Substantiate your answer by arguing from Article 51 and Paragraph 4 of the Article 2 of the UN Charter and other recent examples in this regard. **(20)**

Q. No. 5. Define treaty according to Vienna Convention on the law of treaties 1969 and explain the following: **(20)**
  (i) Nature of relationship of a state with an individual
  (ii) Territorial and Extra-Territorial asylum
  (iii) The Nottebohm Case

Q. No. 6. According to Austin's laws "properly so-called" are the commands of a sovereign, and "International Law is no law, it is only positive morality". In Fitzmaurice view, "a necessary characteristic of any system of law, "properly so-called" is its enforceability, and "international law possesses that characteristic, even if only in a rough and rudimentary form." **(20)**
In the light of the above statements, discuss the true nature of international law while taking into account the development that have taken place after the Second World War.

Q. No. 7. What are the constituent elements of international responsibility? Also discuss the forms of reparation for the breach of an obligation by a State with the help of relevant provisions of the Draft Code of International Law Commission on Responsibility of States for Internationally Wrongful Acts, 2001. **(20)**

Q. No. 8. The International Court of Justice (ICJ) has no so-called compulsory jurisdiction.
  (a) Explain under what circumstances the ICJ has jurisdiction to settle an inter-state dispute. (10)
  (b) Explain whether or not in the view of the ICJ its "provisional measures" are binding. (10) **(20)**

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT
INTERNATIONAL RELATIONS, PAPER-I

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II**. **ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must   be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.

PART-II

Q. No. 2. Discuss the main principles of Constructivism in International Relations. Give a comparative analysis of constructivism and realism with examples. **(20)**

Q. No. 3. What are the best policy options to deal with asymmetrical warfare? **(20)**

Q. No. 4. Role of IMF in developing countries is a contested issue in academic research. What are some positive and negative implications on low income countries? **(20)**

Q. No. 5. Discuss the significance of IAEA. Critically evaluate its role in nuclear non-proliferation. **(20)**

Q. No. 6. Do you think global power structure is passing through transition? What are the contours of big powers strategic realignment? **(20)**

Q. No. 7. Discuss the concept of state sovereignty. What are the major arguments about non-interference in International Law? **(20)**

Q. No. 8. Does China's rise challenge the global political system? What are the implications on Balance of Power Politics? **(20)**

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

Roll Number

INTERNATIONAL RELATIONS, PAPER-II

TIME ALLOWED: THREE HOURS	**PART-I (MCQS)** MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	**PART-II** MAXIMUM MARKS = 80

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II. ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.

PART-II

Q. No. 2. John Mearsheimer blames the United States for the ongoing Ukraine Crisis. How do you assess this crisis? Support your argument by drawing empirical evidence from the conflict scenarios. **(20)**

Q. No. 3. What are the various strands of the Indo-Pacific construct of the U.S. and its allies? What are the options for Pakistan to deal with the significance assigned to India in the Indo-pacific region? **(20)**

Q. No. 4. Write a detailed note on evolving domestic political dynamics of Afghanistan in the wake of U.S. withdrawal from the country. Discuss key constraints to Pakistan's foreign policy towards Afghanistan. **(20)**

Q. No. 5. Pakistan is reckoned among the top 10 most vulnerable countries to climate change. What urgent policy measures Pakistan need to initiate to mitigate the climate effects? **(20)**

Q. No. 6. Pakistan has affirmed its commitment to the 2030 Agenda of Sustainable Development Goals (SDGs). How modest is Pakistan's progress on SDGs and what are the challenges that Pakistan faces in realizing these goals? **(20)**

Q. No. 7. How has India's scrapping of its constitutional law (articles 370 and 35A) that grants special status to the Indian-administered Kashmir impacted the legal standing of Kashmir dispute? **(20)**

Q. No. 8. How are international financial institutions i.e., FATF, IMF and multilateral organizations used as tool of coercion and what are options for countries like Pakistan to safeguard their interests? **(20)**

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

Roll Number

ISLAMIC HISTORY & CULTURE

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II** by selecting **TWO** questions from **EACH   SECTION. ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.

PART-II
SECTION-I

Q. No. 2. "Treaty of Hudaybiyyah is a master piece of foreign politics of the Holy Prophet ﷺ". Argue this statement with a scholarly approach. **(20)**

Q. No. 3. Derive Islamic principles of elections from the process of the selection of the Rightly Guided Caliph Usmān ⬜. **(20)**

Q. No. 4. Explain the causes and effects of political divisions and schisms among muslims during first three islamic centuries. **(20)**

Q. No. 5. Give an overall comparison between the rule of Banu Umayyah and Banu Abbās. **(20)**

SECTION-II

Q. No. 6. Discuss critically the political role and influence of Barmuk family during the caliphate of the Abbasids. **(20)**

Q. No. 7. Discuss critically the causes and effects of the end of islamic rule in Spain. **(20)**

Q. No. 8. Write a scholarly note on contribution of Islam to modern civilization. **(20)**

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

JOURNALISM & MASS COMMUNICATION

TIME ALLOWED: THREE HOURS	**PART-I (MCQS)**	**MAXIMUM MARKS = 20**
PART-I(MCQS): MAXIMUM 30 MINUTES	**PART-II**	**MAXIMUM MARKS = 80**

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II**. **ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.

PART – II

Q. No. 2. What is social responsibility theory? Explain its importance with logic and arguments. Also give examples with reference to Pakistani society. **(20)**

Q. No. 3. The excessive use of mobile phone affecting the studies of school/college students. Give your opinion with logic and arguments. **(20)**

Q. No. 4. Explain in detail the code of ethics for media professionals. **(20)**

Q. No. 5. Elaborate in detail the diffusion and innovation theory, its merits and demerits and its applicability in Pakistani society. **(20)**

Q. No. 6. What is development support communication? How it can be helpful for national development? Support your answer with logic & arguments. **(20)**

Q. No. 7. Suppose you are a PRO of Police department. Suggest a plan and measure to control street crime in the country. **(20)**

Q. No. 8. Write notes on any TWO of the following: **(10 each) (20)**

    (a) Press-Government relatives in Pakistan

    (b) PEMRA

    (c) Role of media in Democracy

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

LAW

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II**. **ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.

PART-II

Q. No. 2. Can an executing court attach and sell all kinds of moveable and immoveable properties of the judgement debtor or there are certain types of property which are exempted from attachment and sale? Discuss. **(20)**

Q. No. 3. Define and distinguish Review and Revision. **(20)**

Q. No. 4. "No one can be allowed to contradict his past statement or action." Elaborate this phrase with reference to the relevant articles of the QSO 1984. **(20)**

Q. No. 5. There are three different types of statements of an accused which can be recorded by a magistrate and a court. One is during investigation and two are during trial. Elaborate these statements and differentiate them with each other. **(20)**

Q. No. 6. When can a Court of Sessions alter the charge? If the charge is altered, what will be the effect of this alteration on the trial proceedings against the accused? Discuss. **(20)**

Q. No. 7. Define and distinguish the offences of Theft, Extortion, Robbery and Dacoity. Give examples to support your answers. **(20)**

Q. No. 8. Write notes on the following: **(10 each)** **(20)**

    (a) Power of court to appoint or remove arbitrators

    (b) Arbitration in suits

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

Roll Number

MERCANTILE LAW

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II**. **ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.

PART – II

Q. No. 2. Who is an Unpaid Seller? What are his rights against the Goods, as provided by the Sale of Goods act 1930? **(20)**

Q. No. 3. What ideology lays behind the registration of 'Memorandum of Association' and 'Articles of Association' as distinctive documents? How they differ from each other? **(20)**

Q. No. 4. Discuss the powers of Court, as far as they are related to the modification and rescission of award granted by the arbitrator, under The Arbitration Act, 1940. **(20)**

Q. No. 5. What considerations have been provided by the Electronic Transactions Ordinance, for the purpose of recognition and appraisal of electronic document? **(20)**

Q. No. 6. What is Competition Law? Why it is needed? Describe the composition, powers and functions of Competition Commission of Pakistan. **(20)**

Q. No. 7. In case of unauthorized electronic fund transfer by the consumer, how his liability would be determined? **(20)**

Q. No. 8. Write short notes on following concepts of Contract Act 1872. **(5 each) (20)**
a) Contract of Indemnity.
b) Contract of Guarantee.
c) Contract of Bailment.
d) Contract of Agency.

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

MUSLIM LAW AND JURISPRUDENCE

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80

NOTE: (i) **Part-II** is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II**. **ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.

PART – II

Q. No. 2. The Quran provides Legal validity to other Primary Sources; when a Principle is laid down in the Quran, the rest of the Sources of Islamic Law cease to be effective. Discuss. **(20)**

Q. No. 3. 3Discuss and explain the importance of the Sunnah as a Source of Islamic law. Also discuss the difference between Sunnah and Hadith. **(20)**

Q. No. 4. Define Qiyas (Analogy). How does the jurist use it to extend the law from the texts? What is the difference between Qiyas and Istihsan? **(20)**

Q. No. 5. Ijtehad is a necessity where there is no solution of a certain issue in the first two sources of Islamic law. Explain the qualifications of a Mujtahid. **(20)**

Q. No. 6. What are the objects of punishment in Islam? Also elaborate the different kinds of punishment in Islamic law. **(20)**

Q. No. 7. Explain the idea of State sovereignty in Islam. What are the qualifications for the head of State under Islamic Law? **(20)**

Q. No. 8. (a) What is your take on the current judgment by Federal Shariah Court of Pakistan on Riba? **(10)**
(b) What are the measures which can be taken to showcase the full potential of Islamic finance in Pakistan? **(10)** **(20)**

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023 FOR RECRUITMENT
TO POSTS IN BS-17 UNDER THE FEDERAL GOVERNMENT
PERSIAN

Roll Number

| TIME ALLOWED: THREE HOURS | PART-I (MCQS) | MAXIMUM MARKS = 20 |
| PART-I(MCQS): MAXIMUM 30 MINUTES | PART-II | MAXIMUM MARKS = 80 |

NOTE: (i) Part-II is to be attempted on the separate **Answer Book**.

(ii) Attempt **ONLY FOUR** questions from **PART-II** by selecting **TWO** questions from **EACH SECTION**. Answer must be written in respective language except where specified in the question paper. **ALL** questions carry **EQUAL** marks.

(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.

(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.

(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.

(vi) Extra attempt of any question or any part of the question will not be considered.

PART – II
SECTION – I

سوال نمبر2 : از موضوعات زیر دربارهٔ دو به زبان فارسی بنویسید. (10 ، 10) (20)

ا . روابط ایران و پاکستان

ب . جشن نو روز در کشور های ایران، پاکستان و افغانستان

ج . علامه اقبال شاعر ملی پاکستان

سوال نمبر3 : ا . شبه جمله چیست با امثال توضیح بدهید. (10)

ب . از مصادر مرکب زیر پنج را در جمله ها به کار ببرید . (10)

(20)

از دست دادن ، آواز خواندن ، به درد خوردن ، تصمیم گرفتن ، دوست داشتن ، درس دادن ،
فرا یافتن ، درست کردن.

سوال نمبر4 : تاثیر زبان فارسی بر اردو را مورد بحث قرار دهید. (20)

سوال نمبر5 : متن زیر را به فارسی ترجمه کنید: (20)

Quaid-i- Azam Mohammad Ali Jinnah was the great democrat. He hated dictatorship and its various forms. He believed in the fundamental rights of every man and woman. He said that every citizen of Pakistan was free to hold his belief, both political and religious. He believed that every person should be free to say what he believes. He told his people to criticize the government officers to behave as servants and not rulers of the country.

SECTION – II

سوال نمبر 6 : " فلسفهٔ خودی علامه اقبال" چیست؟ بحث کنید . (20)

سوال نمبر7 : متن زیر را به زبان انگلیسی ترجمه کنید . (20)

محمد بن قاسم فرزند قابل فخر امت مسلمه بود. او نه تنها به وسیلهٔ جهاد در دیار هند سلطه اهل هنود را بخاک یکسان ساخت بلکه وسیله ای به میان آمدن یک کشور اسلامی بنام پاکستان نیز گردید. در قلوب مسلمانان احساس بیدار کرد و آنها را مجبور به قیام در مقابل اهل هنود ساخت و به همین مناسبت آمدن این جنرال جوان به سند برای مسلمانان پاکستان قابل اهمیت و افتخار است. مردم این سپه سالار جوانِ باعزم را از نزدیک دیدند سخنانش را شنیدند و از دل و جان آن را پذیرفتند. و از همین جا دین مقدس اسلام در این منطقه جهان پخش گردید. بابای پاکستان حضرت قایداعظم محمد علی جناح فرمود : "بنیان پاکستان آن روزی گذاشته شد که محمد بن قاسم در این سر زمین قدم گذاشت." فاتح سند محمد بن قاسم در 75 هجری در سر زمین طایف در عربستان سعودی چشم به جهان گشود و در همان منزل ایام طفولیت را سپری نمود.

Page 1 of 2

PERSIAN

(الف)

بیار باده که بنیادِ عمر بر بادست	بیا که قصر اَمَل سخت سست بنیادست
ز هر چه رنگِ تعلق پذیرد آزادست	غلامِ همتِ آنم که زیر چرخِ کبود
سروش عالَمِ غیبم چه مژدهها دادست	چه گویمت که به میخانه دوش مست و خراب
نشیمن تو نه این گُنجِ محنت آبادست	که ای بلندنظر شاهباز سِدره نشین

(ب)

بگشای لب که قند فراوانم آرزوست	بنمای رخ که باغ و گلستانم آرزوست
کز دیو و دد ملولم و انسانم آرزوست	دی شیخ با چراغ همیگشت گرد شهر
گفت آنکه یافت مینشود آنم آرزوست	گفتند یافت مینشود جستهایم ما گفت آن که
شیر خدا و رستم دستانم آرزوست	زین همرهان سست عناصر دلم گرفت

(ج)

کسی به فکر گل ها نیست
کسی به فکر ماهی ها نیست
کسی نمی خواهد
باور کند که باغچه دارد می میرد
که قلب باغچه در
زیر آفتاب ورم کرده است
که ذهن باغچه دارد آرام آرام
از خاطرات سبز تهی می شود.
و حس باغچه انگار
چیزی مجردست که در انزوای باغچه پوسیده ست....

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT
PHILOSOPHY

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II**. **ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.

PART-II

Q. No. 2. How does Ibn-Rushd reconcile Philosophy with Religion? Discuss in detail. **(20)**

Q. No. 3. What is Pragmatism? Discuss Pragmatism as a method with reference to William James. **(20)**

Q. No. 4. Discuss Kant's moral proof for the existence of God. **(20)**

Q. No. 5. Hegelian Philosophy is mainly responsible for the contemporary anti-metaphysical movement (e.g., Logical Positivism). Discuss. **(20)**

Q. No. 6. Discuss the need of principle of movement in the structure of Islam in the Philosophy of Iqbal. **(20)**

Q. No. 7. State and explain the cardinal principles of Leibniz monadology. **(20)**

Q. No. 8. Give critical exposition of Berkeley's doctrine of Esse Est Percipi or "To be is to be perceived". **(20)**

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

PHYSICS, PAPER-I

TIME ALLOWED: THREE HOURS	PART-I (MCQS) MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II MAXIMUM MARKS = 80

NOTE: (i)   **Part-II** is to be attempted on the separate **Answer Book.**
      (ii)   Attempt **ONLY FOUR** questions from **PART-II. ALL** questions carry **EQUAL** marks.
      (iii)   All the parts (if any) of each Question must be attempted at one place instead of at different places.
      (iv)   Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
      (v)   No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
      (vi)   Extra attempt of any question or any part of the question will not be considered.
      (vii)   **Use of Calculator is allowed.**

PART – II

Q. 2.   **(a)**   What is Gradient of a scalar function? Give its physical significance and show that $\overrightarrow{Grad}\varphi = \vec{\nabla}.\varphi$ (10)

       (b)   Define the term 'acceleration' and find its Cartesian components.   (06)

       (c)   If $\vec{A} = xz^3\hat{\imath} - 2x^2z\hat{\jmath} + 2yz^4\hat{k}$, then find curl of A at the point (1,-1,1)   (04)   **(20)**

Q. 3.   **(a)**   Explain the rotational kinetic energy and determine its formula for a disc, hoop and sphere.   (10)

       (b)   What do you mean by the term 'inertia' in physics? Calculate respectively the rotational inertia of a solid cylinder and a hollow cylinder about an axis of symmetry.   (06)

       (c)   Calculate the angular speed of the second's hand, minutes hand and hour's hand of a watch.   (04)   **(20)**

Q. 4.   **(a)**   What was Physics like before relativity and how did Einstein come up with his theory? Mathematically explain how mass and energy is interchangeable?   (10)

       (b)   Discuss in detail the relativity of length using Einstein's special theory of relativity.   (06)

       (c)   Calculate the mass equivalent of energy from an antenna radiating 10KW for 24 hours.   (04)   **(20)**

Q. 5.   **(a)**   Define capillarity and derive an expression for the rise of liquid in a capillary tube to show that the height of the liquid column supported is inversely proportional to the radius of the tube.   (10)

       (b)   What are fluids? Write their important characteristics.   (06)

       (c)   A cylindrical swimming pool has radius 2m and depth 1.3m. It is filled completely with salt water.
           Given, density of salt water = $1.03 \times 10^3 kgm^{-3}$, volume of water = $16.34 m^3$, and the atmospheric pressure = $1.013 \times 10^5 Pa$. Calculate the pressure at the bottom of the pool.   (04)   **(20)**

PHYSICS, PAPER-I

Q. 6.   **(a)**   For a wave travelling through a medium, demonstrate that the total energy per unit volume is always equal to one half the kinetic and one half the potential energy.   (10)

(b)   The longitudinal waves can pass through solids. How it is possible and on what parameters the velocity of such waves will depend?   (06)

(c)   The angular Vibrational frequency of *CO* molecule is $0.6 \times 10^{15} s^{-1}$. Calculate the amount of work required for stretching it by 0.5Å from the equilibrium position.   (04)   **(20)**

Q. 7.   **(a)**   An ideal gas is enclosed in a cylinder with movable piston. Calculate the work done on such gas and show that pressure force is non-conservative.   (10)

(b)   State and briefly explain the intermolecular forces.   (06)

(c)   Oxygen gas having a volume of $1130 cm^3$ at 42°C and a pressure of 101kPa expanded until its volume is $1530 cm^3$ and its pressure is 106kPa. Find the number of moles of oxygen in the system and its final temperature.   (04)   **(20)**

Q. 8.   Write short notes on any TWO of the following.   **(10 each)**   **(20)**
   a. Kepler's Law of Periods
   b. Michelson interferometer
   c. Young's double slit experiment

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023 FOR RECRUITMENT
TO POSTS IN BS-17 UNDER THE FEDERAL GOVERNMENT

Roll Number

PHYSICS, PAPER-II

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
  (ii) Attempt **ONLY FOUR** questions from **PART-II. ALL** questions carry **EQUAL** marks.
  (iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
  (iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
  (v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
  (vi) Extra attempt of any question or any part of the question will not be considered.
  (vii) **Use of Calculator is allowed.**

PART – II

Q. 2. A particle of mass m is in the state

$$\psi(x,t) = A\,e^{-a\left[\left(\frac{mx^2}{h}\right)+it\right]}$$

Where A and a are positive constants.
  (a) Find A. (5)
  (b) For what potential energy function V(x) does $\psi(x,t)$ satisfy the Schrodinger equation? (5)
  (c) Calculate the expectation values of x, x^2, p, and p^2 (5)
  (d) Find σ_x and σ_y. Is their product consistent with the uncertainty principle? (5) **(20)**

Q. 3. **(a)** Consider a pair of copper wires 1 mm in diameter and 5 cm apart. In copper the number of conduction electrons per cubic meter is 8.45×10^{28}. Suppose their mean drift velocity v is 0.3 cm / s, calculate current in each wire. (8)
  (b) If the wires are 20 cm apart, calculate the magnetic force on the wires. (8)
  (c) Define electric current in a wire with respect to number of charges and their drift velocity. (4) **(20)**

Q. 4. Give expressions for the following quantities in terms of *e, h, c, k, m_e* and *m_p*.
  (a) The energy needed to ionize a hydrogen atom. (5)
  (b) The difference in frequency of the Lyman alpha line in hydrogen and deuterium atoms. (5)
  (c) The magnetic moment of the electron. (5)
  (d) The spread in measurement of the π^0 mass, given that the π^0 lifetime is τ. (5) **(20)**

Q. 5. **(a)** An atom is capable of existing in two states: a ground state of mass M and an excited state of mass $M + \Delta$. If the transition from ground to excited state proceeds by the absorption of a photon, what must be the photon frequency in the laboratory where the atom is initially at rest? (7)
  (b) Derive the energy levels of the hydrogen atom, from Coulomb's law and the simple quantization of angular momentum. (7)
  (c) In radio astronomy, hydrogen atoms are observed in which, for example, radiative transitions from n = 109 to n = 108 occur. What are the frequency and wavelength of the radiation emitted in this transition? (6) **(20)**

Q. 6. **(a)** Consider the elastic vibrations of a crystal with one atom in the primitive cell and calculate the frequency of an elastic wave in terms of the wavevector that describes the wave and in terms of the elastic constants. (12)
  (b) Describe vibrations of crystal. (8) **(20)**

Q. 7. **(a)** Discuss density of states in Three Dimension (8)
  (b) Describe Debye Model for Density of States (8)
  (c) Define phonon heat capacity. (4) **(20)**

Q. 8. Write Notes on any TWO of the following: **(10 each)** **(20)**
  (a) Maxwell's Equations
  (b) Magnetic Materials: (Ferro-Dia-Para)
  (c) Black Body Radiation

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

Roll Number

POLITICAL SCIENCE, PAPER-I

TIME ALLOWED: THREE HOURS	PART-I (MCQS) MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II MAXIMUM MARKS = 80

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II,** by selecting **TWO** questions from **EACH SECTION. ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.

PART-II
SECTION-A

Q. No. 2. Explain Bentham's greatest happiness of the greatest number. **(20)**

Q. No. 3. What are Al-Ghazali's pre-requisites for becoming a Khalifa? **(20)**

Q. No. 4. Expound Iqbal's vision for rise of Muslims in South Asia in the era of colonialism. **(20)**

Q. No. 5. Write short notes on the following **(10 each) (20)**

    (a) Existentialism is humanism
    (b) Cogito, ergo sum (I think, therefore I am)

SECTION-B

Q. No. 6. Rights and duties are two facets of the same coin. Elaborate. **(20)**

Q. No. 7. In an Islamic state, Islam is considered a complete code of life, which provides guidelines for proper management of political power. Elaborate. **(20)**

Q. No. 8. What are salient features of a professional and apolitical bureaucracy? **(20)**

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

Roll Number

POLITICAL SCIENCE, PAPER-II

TIME ALLOWED: THREE HOURS	**PART-I (MCQS) MAXIMUM MARKS = 20**
PART-I(MCQS): MAXIMUM 30 MINUTES	**PART-II MAXIMUM MARKS = 80**

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
   (ii) Attempt **ONLY FOUR** questions from **PART-II** by selecting **ONE** question from **SECTION-A** and **THREE** questions from **SECTION-B**. **ALL** questions carry **EQUAL** marks.
   (iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
   (iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
   (v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
   (vi) Extra attempt of any question or any part of the question will not be considered.

PART-II
SECTION-A

Q. No. 2. The people of South Asia had suffered because of missed opportunities for regional development, connectivity, and cooperation. Evaluate the performance of SAARC in the light of this statement. **(20)**

Q. No. 3. "The military's political role has undermined civilian institutions and the growth of democratic political culture". Analyze civil military relations in Pakistan. **(20)**

SECTION-B

Q. No. 4. WTO is a tool of developed countries to be used for exploitation of developing countries. Do you agree? Give arguments. **(20)**

Q. No. 5. Pakistan China friendship is based on reciprocal developments. Analyze. **(20)**

Q. No. 6. Judicial activism is the natural corollary of poor governance in Pakistan. Do you agree? **(20)**

Q. No. 7. What do you understand by the term "Start Up" and How Start Up culture can be developed in Pakistan? **(20)**

Q. No. 8. Despite the enactment of 18th amendment in the constitution of Pakistan 1973, the question of political devolution is as yet largely unresolved. Discuss. **(20)**

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

PSYCHOLOGY

TIME ALLOWED: THREE HOURS	**PART-I (MCQS) MAXIMUM MARKS = 20**
PART-I(MCQS): MAXIMUM 30 MINUTES	**PART-II MAXIMUM MARKS = 80**

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II. ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.

PART – II

Q. No. 2. What is gestalt school of thought? Write major Gestalt principles of visual perception. **(20)**

Q. No. 3. Describe in detail the Jean Piaget's Theory and Stages of Cognitive Development. **(20)**

Q. No. 4. Narrate how Wallas Stage Model of Creativity can help in developing an innovative idea? Is the Gardner theory of multiple intelligences an accurate and sufficient explanation of intelligence? Support your answer with examples. **(20)**

Q. No. 5. What are personality disorders? Explain in detail. **(20)**

Q. No. 6. What are the different ways in which conflict can occur in an organization? What are the major Conflict Management Styles to deal with it? Write in detail. **(20)**

Q. No. 7. Write a note on the importance of emotions in human psychology. What are the major theories that describe the significance of emotions in human behaviour? **(20)**

Q. No. 8. What are major tests to assess human intelligence? Write relevant tests to measure human intelligence in detail. **(20)**

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023 FOR RECRUITMENT TO POSTS IN BS-17 UNDER THE FEDERAL GOVERNMENT

Roll Number

PUBLIC ADMINISTRATION

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II**. **ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.

PART-II

Q. No. 2. What are the different ways in which policies and programs can be evaluated? Discuss the approaches and explain the distinctions in these approaches. **(20)**

Q. No. 3. A great deal of political debate in the last two decades has focused on strategies for controlling the federal budget deficit. Why is this an important issue for the government and what strategies have been employed by governments to manage the deficit? Give examples. **(20)**

Q. No. 4. Contemporary perspectives on leadership suggest that leadership is not just the responsibility of those in positions of authority but can and should be exercised throughout the organization. Write an essay defending this suggestion. Can individuals that are normally considered "followers" exercise leadership? Explain. **(20)**

Q. No. 5. Public officials at all levels have established processes to encourage more substantive forms of citizen engagement. What is citizen engagement? Give examples of these efforts, and what is the potential, in your opinion, for these efforts to create truly meaningful engagement? **(20)**

Q. No. 6. It has been widely argued that the impact of globalization on public administration should not be underestimated. What is meant by the term 'globalization'? How does this trend affect public administrators at various levels and why should administrators pay attention to the global context of their work? Explain. **(20)**

Q. No. 7. New Public Management has been hailed as the dominant paradigm for public service in the last two decades. In your opinion, how viable is NPM for developing countries taking into account the distinct and complex environment of public sector organizations in such countries? **(20)**

Q. No. 8. **(a)** Planning is an important part of the policy process. Describe the various types of planning and discuss the objectives of each type. **(10)**

(b) Implementation is the action phase in which plans and policies are put into operation. Discuss the techniques that can be utilized in the beginning stages of the implementation process. **(10)** **(20)**

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT
__PUNJABI__

TIME ALLOWED: THREE HOURS	PART-I (MCQS) MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II MAXIMUM MARKS = 80

NOTE: (i)   Part-II is to be attempted on the separate Answer Book.
   (ii)   Attempt ONLY FOUR questions from PART-II. Answer must be written in respective language except where specified in the question paper. ALL questions carry EQUAL marks.
   (iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
   (iv)   Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
   (v)   No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
   (vi)   Extra attempt of any question or any part of the question will not be considered.

PART-II

نوٹ: ایس حصے وچوں پنج (5) سوالاں دے جواب دیو۔

سوال نمبر2۔   عبدالغفور قریشی دے نظریے موجب پنجابی زبان دی کتھا دا ڈھیر گوڑھا احاطہ کرو۔   (16)

سوال نمبر3۔   پنجابی بولی دا پچھوکڑ "آصف خان" دے نظریے دی روشنی ہیٹھ واضح کرو۔   (16)

سوال نمبر4۔   "باراں ماہہ تے اج دے شاعر" دے سرناویں ہیٹھ حسین شاہد دے کیتے جتن راہیں   (16)
باراں ماہہ دی وضاحت کرو۔

سوال نمبر5۔   بلھے شاہ دیاں کافیاں وچوں حقیقت پسندی دے عناصر شعری مثالاں راہیں واضح   (16)
کرو۔

سوال نمبر6۔   ناول دیوا تے دریا دے معاشرتی پکھ اگھیڑ کے سامنے لیاؤ۔   (16)

سوال نمبر7۔   "چونبڑاں" پکھوں ارشد میر دے ٹچکر ڈھنگ نوں واضح کرو۔   (16)

سوال نمبر8۔   سچی سرکار از عبدالکریم ثمر وچ دسدے (غزویاں) لاماں دا احاطہ کرو۔   (16)

سوال نمبر9۔   ہیٹھ دتے سرناویاں وچوں کسے دو اُتے نوٹ لکھو۔   (8   (16)
+ 8)

(الف)   کافی   (ب)   انشائیہ   (ج)   ڈرامہ

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023 FOR RECRUITMENT
TO POSTS IN BS-17 UNDER THE FEDERAL GOVERNMENT

Roll Number

PURE MATHEMATICS

TIME ALLOWED: THREE HOURS	MAXIMUM MARKS = 100

NOTE: (i) Attempt **FIVE** questions in all by selecting **TWO** Questions each from **SECTION-A&B** and **ONE** Question from **SECTION-C. ALL** questions carry **EQUAL** marks.

  (ii) All the parts (if any) of each Question must be attempted at one place instead of at different places.

  (iii) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.

  (iv) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.

  (v) Extra attempt of any question or any part of the attempted question will not be considered.

  (vi) **Use of Calculator is allowed.**

SECTION-A

Q. 1. (a) Find centre of S_3. (10)

(b) Using the row operations, show that the matrix $\begin{pmatrix} 1 & 2 & -3 \\ 1 & -2 & 1 \\ 5 & -2 & -3 \end{pmatrix}$ has no inverse. (10) **(20)**

Q. 2. (a) For any group G, show that $\dfrac{G}{\{e\}} \cong G$ and $\dfrac{G}{G} \cong \{e\}$. (10)

(b) Suppose U and W are distinct four dimensional subspaces of a vector space V of dimension six. Find the possible dimension of $U \cap W$. (10) **(20)**

Q. 3. (a) For what value of α is the matrix $\begin{pmatrix} -\alpha & \alpha-1 & \alpha+1 \\ 1 & 2 & 3 \\ 2-\alpha & \alpha+3 & \alpha+7 \end{pmatrix}$ is singular? (10)

(b) Define $T : \Re^3 \to \Re^3$ by $T(x_1, x_2, x_3) = (-x_3, x_1, x_1+x_3)$. Find $N(T)$. Is T one-to-one? (10) **(20)**

SECTION-B

Q. 4. (a) Find the value of θ and the limit in order that $\lim\limits_{x \to 0} \dfrac{\sin 2x + \theta \sin x}{x^3}$ be finite. (10)

(b) Show that $x < \sin^{-1} x < \dfrac{x}{\sqrt{1-x^2}}$, 0<x<1. (10) **(20)**

Q. 5. (a) Given that $U = \dfrac{1}{\sqrt{x^2 + y^2 + z^2}}$. Verify that $U_{xx} + U_{yy} + U_{zz} = 0$. (10)

(b) Evaluate $\iint (x^2 + y^2)dxdy$, over the domain bounded by $y = x^2$ and $x = y^2$. (10) **(20)**

Q. 6. (a) Evaluate $\iint (x^2 + y^2)dxdy$, over the region bounded by xy=1, y=0, y=x and x=2. (10)

(b) Find an equation of a normal to the hyperbola $\dfrac{x^2}{a^2} - \dfrac{y^2}{b^2} = 1$ in the form $ax\cos\theta + by\cot\theta = a^2 + b^2$. Prove that the normal is external bisector of the angle between the focal distances of its foot. (10) **(20)**

PURE MATHEMATICS

SECTION-C

Q. 7. **(a)** Determine k such that $U = e^{2x} \cos ky$ is harmonic and find a conjugate harmonic. (10)

(b) Evaluate $\int_C (\frac{1}{z^5} + z^3) dz$ from 1 to -1 along the upper arc of the unit circle. (10) **(20)**

Q. 8. **(a)** Find the Laurent Series of $\frac{1}{1 - z^2}$ in the region $0 < |z - 1| < 2$. (10)

(b) Find the residues at the singular points of $\frac{-Z^2 - 22z + 8}{Z^3 - 5z^2 + 4z}$ which lie inside the (10) **(20)**

circle $|z| = 2$.

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FEDERAL PUBLIC SERVICE COMMISSION
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TO POSTS IN BS-17 UNDER THE FEDERAL GOVERNMENT
PASHTO

TIME ALLOWED: THREE HOUR	MAXIMUM MARKS = 20	PART-I (MCQS)
PART-I(MCQS): MAXIMUM 30 MINUTES	MAXIMUM MARKS = 80	PART-II

NOTE: (i) Part-II is to be attempted on the separate **Answer Book**.
(ii) Attempt **ONLY FOUR** questions from **PART-II.** Answer must be written in **respective language** except where specified in the Question paper. **ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of question will not be considered.

PART-II

سوال نمبر 2: (a) د لاندیني ورکړي شوي انګریزي عبارت په معیاري پښتو کښې ترجمه اوکړئ ۔ **(14)**

Bayazid Ansari is one of those historical, religious, literary and political figures who influenced the whole life of the Pashtoons. He brought about cultural, religious and political revolution in Pashtoon Society. He got together the scattered tribes of the Pashtoons around him, and organized them in a way to have adopted the form of a movement, which is known as the Rowshani Movement in the history of the Pashtoons. This movement was a religious – cum political movement in his life and was changed into a purely political movement after his death till it eventually died out after Abdul Qadir, son of Ahdad, joined Mughals.

(b) ورکړي شوی انګریزي متلونو کښې دري متلونه پښتو ته راواړوئ. **(06) (2 each)**

(i) An empty water pitcher makes a noise in the wind.
(ii) When the turban falls from the head but remains on the shoulders, don not consider it fallen.
(iii) Oh little straw, you have entered the arena.
(iv) You want to buy a horse, and you want it for ten rupees.
(v) The goat said, "If I don't tell the story, my broken leg will".

سوال نمبر 3: (a) د لاندیني پښتو عبارت په معیاري انګریزۍکښې ترجمه اوکړئ ۔ **(14)**

د پښتنو د فطرت او نفسیاتو په رڼا کښې زبردلے ادب په اصل کښې د خوشحال بابا د مکتب فکر او غایت وۀ ۔ په خپل اورد ارتقائي سفر کښې پښتو ادب که هر څو نوي نوي رنګونه خپل کړي دي او د وخت د علمي تقاضو په سبب ئې د نورو ژبو د ادبیاتو نه په خلاص مټ استفاده کړی ده ۔ خوارۀ وارۀ فني مکاتیب پکښې ساز کړی شوي دي ۔ ولي هر که چي په هند کښې د ازادي تحریک شروع شو نو حُل بیا د خپل تشخص په لټون شو ۔ دا یواځي تشخص نۀ وۀ بلکې د قامي تشخص لټون هم وۀ ۔

(b) د پښتو د لاندیني متلونو نه د دربو متلونو په انګریزۍ کښې ترجمه اوکړئ ۔ **(06) (2 each)**

(i) روپۍ می ګټله پوزه می بائیله   **(ii)** بالا مانۍ دي خلاصه وي په نوم د اکبر خان
(iii) د اباسین نه چي اوبۀ غواړي نو تږے نۀ ئي ۔   **(iv)** چي په خوست کښې دي ، هغه په کتاب کښې نشته ۔

(v) کاروان بندیږي د خلقو خولې نۀ بندیږي ۔

سوال نمبر 4: چاربیته څۀ ته وائي او د پښتو چاربیتي اقسام په مثالونو سره واضح کړئ ۔ **(20)**

سوال نمبر 5: د خوشحال خان ختک په ادبي خدماتو جامع نوټ ولیکئ ۔ **(20)**

سوال نمبر 6: د شېر شاه سوري په انتظامي او نظامي/عسکري خدماتو بحث وکړئ ۔ **(20)**

سوال نمبر 7: د بایزید روښان مذهبي او صوفیانه مسلک په حقله په زړه پوري بحث اوکړئ ۔ **(20)**

سوال نمبر 8: لاندینِي اولسي اصنافو څخه د دوو اصنافو تعریف او توضیح په مثالونو سره واضح کړئ ۔ **(10+10) (20)**
(i)بدلہ   **(ii)** لُوبه   **(iii)** بګتۍ   **(iv)** الله هو
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SINDHI

TIME ALLOWED: THREE HOURS	**PART-I (MCQS) MAXIMUM MARKS = 20**
PART-I(MCQS): MAXIMUM 30 MINUTES	**PART-II MAXIMUM MARKS = 80**

NOTE: (i) Part-II is to be attempted on the separate **Answer Book**.
    (ii) Attempt **ONLY FOUR** questions from **PART-II**. Answer must be written in **respective language** except where specified in the question paper. **ALL** questions carry **EQUAL** marks.
    (iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
    (iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
    (v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
    (vi) Extra attempt of any question or any part of the question will not be considered.

PART-II

سوال نمبر2: ‏‏ "سنڌي ٻولي فطرت مان ڦٽي نڪتي آهي" سنڌي ٻولي بابت هي خيال ڪهڙو جو آهي؟ سنڌي ٻولي جي ٻڌ بنياد بابت نظرياتي بحث ڪندي توهان پنهنجا ويچار لکو. **(20)**

سوال نمبر3: مولوي حاجي احمد ملاح جي شاعريءَ جو فني ۽ فڪري جائزو مثال ڏيئي لکو. **(20)**

سوال نمبر4: نظم ، آزاد نظم، نثري نظم ۽ تجريدي نظم م ڪهڙو فرق آهي ؟ مثالن سان واضح ڪريو. **(20)**

سوال نمبر5: انگريزن جي دور م سنڌي ناول جو فڪري اپياس حوالن سان لکو. **(20)**

سوال نمبر6: سنڌي ڊرامي جو ارتقائي جائزو لکندي ، ڊرامي ڪاڪ محل تي تبصرو ڪريو. **(20)**

سوال نمبر7: **(الف)** شاهه لطيف اٿ جو ذڪر ڪهڙن ۽ ڪيترن نالن سان ڪيو آهي. ڪي به پنج بيت لکو جنهن م اٿ جا مختلف نالا استعمال ٿيل هجن. **(10)** **(20)**

    (ب) هيٺين مان ڪن به بن ڪردارن تي نوٽ لکو. **(10)**
    (i) سهڻي   (ii) نوري   (iii) لاکو ڦلاڻي

سوال نمبر8 **(a)** هيٺ ڏنل سنڌيءَ م لکيل پئراگراف جو انگريزيءَ م ترجمو ڪريو. **(10)**

"شاعري فلسفي جي ماءُ آهي. هر فلسفو ابتدا م شاعراڻو خيال ئي هوندو آهي؛ جنهن ڪي بعد م منطق ۽ دليل وسيلي ثابت ڪيو وڃي ٿو. خيال جي ثابتي رڳو سائنس ۽ منطق م ئي ممڪن آهي. شاعريءَ ڪي چڏي؛ سائنس ۽ منطق کان سواءِ پيا سپ طور طريقا عقيدن جي چانو م هلندا آهن ۽ عقيدا ثابتي ناهن گهرندا. ڪنهن به خيال جي سچي سنئين ثابتي ته شاعريءَ مان به ناهي ملندي پر شاعريءَ م ڪي اهڄاڻ ممڪن آهن جيڪي فلسفي ۽ سائنس وسيلي ثابت ٿيا آهن.اها حقيقت آهي ته ڪنهن به خيال جو ذهن م ڦٽڻ ۽ اسرڻ ۽ پئدا ٿيڻ بنيادي طور تي شاعري ئي آهي."

    (b) هيٺ ڏنل انگريزي پيراگراف جو سنڌي م ترجمو ڪريو؟ **(10)** **(20)**

"Bilingual children use whichever linguistic means is available to them to establish themselves as bilingual speakers. If dominance in one language stands in the way of conversing in the other, children compensate by producing accented speech and making sure that they restrict this to home conversations with their parents".

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Roll Number

SOCIOLOGY

TIME ALLOWED: THREE HOURS	PART-I (MCQS) MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II MAXIMUM MARKS = 80

NOTE: (i)   **Part-II** is to be attempted on the separate **Answer Book**.
   (ii)   Attempt **ONLY FOUR** questions from **PART-II**. **ALL** questions carry **EQUAL** marks.
   (iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
   (iv)   Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
   (v)   No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
   (vi)   Extra attempt of any question or any part of the question will not be considered.

PART-II

Q. No. 2.   Education is an important social institution. How conflict and functionalist perspectives view education as institutionalized activity? Which of these approaches can best describe the system of education in Pakistan and how? **(20)**

Q. No. 3.   Explain G. H. Mead's Concepts of Mind, Self and Society along with the basic principles of Symbolic Interactionism. **(20)**

Q. No. 4.   What is ontology, epistemology, methodology? Is there any difference between method and methodology? What is the role of ontology and epistemology in social research? **(20)**

Q. No. 5.   How do time-series, panel, and cohort studies differ? What are some potential problems with cost-benefit analysis? **(20)**

Q. No. 6.   Discuss in detail the theory of justice and Plato's theory of forms and allegory of the cave. **(20)**

Q. No. 7.   What is meant by society? Discuss its types in detail. Also define culture and what is the difference between material and non-material in a society culture? **(20)**

Q. No. 8.   Write notes on the following: **(10 each) (20)**

   (i)   Conversation Analysis
   (ii) Volcano of civilization

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Roll Number

STATISTICS

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
    (ii) Attempt **ONLY FOUR** questions from **PART-II** by selecting **TWO** questions from **EACH SECTION.** ALL questions carry **EQUAL** marks.
    (iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
    (iv) Candidate must write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
    (v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
    (vi) Extra attempt of any question or any part of the attempted question will not be considered.
    (vii) Use of Calculator is allowed.
    (viii) Use of statistical table is allowed.

PART-II
SECTION – A

Q. 2. (a) Calculate the Q1, median and Q3 from the following distribution of weight of containers in Kg, and comment on the symmetry of distribution. (10)

Weight (Kg)	18- 26	27- 35	36- 44	45- 53	54- 62	63- 71	72- 80
# of Containers	13	20	39	40	25	6	12

(b) What is frequency distribution? Discuss briefly the steps involve in construction of frequency distribution. (05)

(c) The first three moments of a distribution about the value 2 of the variable are 1, 16 and -40. Show that the mean is 3, the variance 15 and m3 is -86. Also show that the first three moments about x=0 are 3, 24 and 76. (5) (05) **(20)**

Q. 3. (a) From the following data, determine the linear regression equations of X_1 on X_3 and of X_2 on X_3. (10)

X_1	07	12	14	17	20
X_2	04	07	08	09	12
X_3	01	02	04	05	08

Find the deviations of observed values of X_1 from the regression, i.e., $X_{1.3}$. Repeat the same of X_2, i.e., obtain $X_{2.3}$. Determine the simple correlation co-efficient between the two sets of deviations $X_{1.3}$ and $X_{2.3}$.

(b) What is meant by: (05)
    (i) Regression **(ii)** Regresand **(iii)** Regressor **(iv)** Regressor co-efficient

(c) Describe the Properties of the correlation co-efficient? (05) **(20)**

Q. 4. (a) Derive the Poisson distribution as the limiting form of the binomial distribution, stating clearly the assumptions you make. (08)

(b) Enumerate all the possible (i) combinations and (ii) permutations of 3 letters chosen from the four letters A, B, C, and D. (06)

(c) A box contains 4 bad and 6 good tubes. Two tubes are drawn together at random. One of them is tested and found to be good. What is the probability that other one is good? (06) **(20)**

STATISTICS

SECTION-B

Q. 5. (a) Draw all possible random sample of size $n_1=2$ with replacement from a finite population (12) consisting of 4, 6, 8. Similarly draw all possible random samples $n_2=2$ with replacement from another finite population consisting of 1, 2, 3.

        (i) Find the possible difference between the sample means of the two populations.

        (ii) Construct the sampling distributions of $\bar{x}_1 - \bar{x}_2$ and compute its mean and variance.

        (iii) Verify that $\mu_{\bar{x}_1-\bar{x}_2} = \mu_1 - \mu_2$ and $\sigma^2_{\bar{x}_1-\bar{x}_2} = \dfrac{\sigma_1^2}{n_1} + \dfrac{\sigma_2^2}{n_2}$

(b) Explain sampling and non-sampling errors. What method would you suggest to control each type of error? (08) **(20)**

Q. 6. (a) The two samples A and B detailed below, were taken from normal populations of standard (12) deviation 0.8. Test whether the difference of means is significant

A	10.5,	11.6,	12.7,	12.9,	13.5,	13.6,	14.8	
B	11.3,	12.4,	12.4,	13.9,	14.2,	14.7,	14.9,	15.6

(b) Explain with examples the difference between: (08) **(20)**

        (i) Null and Alternative hypothesis   **(ii)** Simple and composite hypothesis

        (iii) Type I-error and Type II-error   **(iv)** Critical and non-critical region.

Q. 7. (a) The following data represent the result of 3 questions obtained by 3 students in three subjects: (12)

Students	Subjects		
	English	Mathematics	Statistics
1	13	23	22
	18	20	23
	15	16	20
2	21	20	20
	16	14	15
	24	24	22
3	18	17	19
	15	13	21
	12	16	18

Perform an analysis of variance upon these data and test the hypothesis that:

        (i) The subjects are of equal difficulty.

        (ii) The students are of equal ability, and

        (iii) The students and subjects do not interact.

(b) Discuss why using multiple two-sample t-tests is not an appropriate alternative of analysis of (08) **(20)** variance?

Q.8. (a) Given the population 1, 1, 1, 3, 4, 5, 6, 6, 6, and 7. Find (10)

        (i) The probability that a random sample of size 36 selected with replacement will yield sample mean between 3.26 and 4.74

        (ii) The mean and standard deviation for the sampling distribution of means for a sample size of 4 selected at random without replacement. Between what values would you expect at least ¾ of the sample mean to fall?

(b) Explain sampling and non-sampling errors. What methods would you suggest to control each (05) type of error?

(c) Explain with examples the following properties of a point estimator: (05) **(20)**

        (i) Unbiasedness,   **(ii)** Consistency, and   **(iii)** Efficiency.

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Roll Number

TOWN PLANNING & URBAN MANAGEMENT

TIME ALLOWED: THREE HOURS	**PART-I (MCQS) MAXIMUM MARKS = 20**
PART-I(MCQS): MAXIMUM 30 MINUTES	**PART-II MAXIMUM MARKS = 80**

NOTE: (i) **Part-II** is to be attempted on the separate **Answer Book.**
  (ii) Attempt **ONLY FOUR** questions from **PART-II**. **ALL** questions carry **EQUAL** marks.
  (iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
  (iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
  (v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
  (vi) Extra attempt of any question or any part of the question will not be considered.

PART – II

Q. No. 2. What is Land use and Building Control? Why it is necessary for us to use both controls in cities? Explain tools to exert these controls in Pakistan. **(20)**

Q. No. 3. Why Master Plans are necessary? Explain difference between old and contemporary master plans. **(20)**

Q. No. 4. Explain the concept of urbanization. Describe pros and cons of urbanization. How can we manage urbanization in Pakistan? **(20)**

Q. No. 5. Removal of the encroachment has become a ticklish task for local bodies. Comment. Elucidate statutory, administrative, and political constraint for the removal of encroachments in big cities of Pakistan. **(20)**

Q. No. 6. Describe the concept of zoning. Explain the classification of zoning. How zoning can improve the urban environment? **(20)**

Q. No. 7. Write short notes on any TWO of the following: **(10 each)** **(20)**
  (a) Usage and the limitations of Geographic Information System (GIS) in planning.
  (b) Challenges for the implementation of Sustainable Development Goals (SDGs) in Pakistan.
  (c) Affordable Housing in Pakistan.

Q. No. 8. Write short notes on any TWO of the following: **(10 each)** **(20)**
  (a) Difference between Spatial and Master Plan.
  (b) The advantages and disadvantages of Vertical Growth.
  (c) Low Income Housing in Pakistan.

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URDU LITERATURE

Roll Number

| TIME ALLOWED: THREE HOURS | PART-I (MCQS) | MAXIMUM MARKS = 20 |
| PART-I(MCQS): MAXIMUM 30 MINUTES | PART-II | MAXIMUM MARKS = 80 |

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**

(ii) Attempt **ALL** questions.

(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.

(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.

(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.

(vi) Extra attempt of any question or any part of the question will not be considered.

PART-II

سوال نمبر 2۔(الف) درج ذیل میں سے کسی ایک جزو کی تشریح کیجئے اور شاعر کا نام بھی لکھیئے۔ (15)

جزو اوّل

(1) کیوں جل گیا نہ تاب رُخِ یار دیکھ کر
جلتا ہوں اپنی طاقتِ دیدار دیکھ کر

(2) واحسرتا کہ یار نے کھینچا ستم سے ہاتھ
ہم کو حریصِ لذتِ آزاد دیکھ کر

(3) ان آبلوں سے پاؤں کے گھبرا گیا تھا میں
جی خوش ہوا ہے راہ کو پُرخار دیکھ کر

(4) گِرنی تھی ہم پہ برق تجلی ، نہ طور پر
دیتے ہیں بادہ ظرفِ قدح خوار دیکھ کر

جزو دوم

اے کہ تجھ کو کہا گیا سرمایہ دارِ حیلہ گر
دستِ دولت آفریں کو مُزدیوں ملتی رہی زکات
ساحرُالموط نے تجھ کو دیا برگِ حشیش
نسل ، قومیت، کلیسا، سلطنت ، تہذیب و رنگ

شاخِ آہو پر رہی صدیوں تلک تیری برات
اہلِ ثروت جیسے دیتے ہیں غریبوں کو زکات
اور تو اے بے خبر سمجھا اسے شاخِ نبات
'خواجگی' نے خوب چُن چُن کے بنائے مسکرات

(ب) مندرجہ ذیل میں سے کسی ایک کا جواب لکھیئے۔ (10)

فیّض کی شاعری 'وعدے اور اُمید' کی شاعری ہے۔ اس خیال کی روشنی میں دستِ صبا کا تجزیہ کیجئے۔

یا

'راشد کی نظم میں ان کے عہد کی سیاسی و سماجی صورتِ حال کا عکس ہے حد نمایاں ہے' "ایرن میں اجنبی" کے حوالے سے وضاحت کیجئے۔

سوال نمبر 3۔(الف) "احمد ندیم قاسمی نے اپنے افسانوں میں زندگی کے مسائل کے ساتھ انسانی نفسیات کی گرہیں بھی کھولی ہیں"۔ اس رائے کی روشنی میں 'کپاس کا پھول' کا جائزہ لیجئے۔ (15)

یا

'یوسفی کے ہاں مزاح واقعاتی یا سانحاتی سے زیادہ گفتگو اور تبصرے کا ہے'۔ 'آبِ گم' کے حوالے سے وضاحت کیجئے۔

(ب) مندرجہ ذیل میں سے کسی ایک اقتباس کی تشریح کیجئے نیز مصنف و مضمون کا نام بھی لکھیئے۔ (10)

شجرہ اور حویلی بھی ایک ایسی جائے اماں تھی۔ ممکن ہے بے بے ادب نگاہوں کو یہ تصویر میں ڈھنڈار دکھائی دے لیکن جب قبلہ اس کی تعمیراتی نزاکتوں کی تشریح فرماتے تو اس کے آگے تاج محل سیدھا، سپاٹ ، گنوار گھرونڈا معلوم ہوتا۔ مثلاً دوسری منزل پر ایک دروازہ نظر آتا تھا جس کی چوکھٹ اور کواڑ جھڑ چلے تھے۔ قبلہ اسے فرانسیسی دریچہ بتاتے تھے۔ اگر یہاں واقعی کوئی ولایتی دریچہ تھا تو یقیناً یہ وہی دریچہ ہوگا جس میں جڑے ہوئے آئینہ جہاں نما کو توڑ کر ساری کی ساری ایسٹ انڈیا کمپنی آنکھوں میں اپنے جوتوں کی دھول جھونکتے گزر گئی۔

یا

مرحوم ہماری قدیم تہذیب کا بے مثل نمونہ تھے۔ شرافت اور نیک نفسی ان پر ختم تھی۔ چہرے سے شرافت ، ہمدردی اور شفقت ٹپکتی تھی اور دل کو ان کی طرف کشش ہوتی تھی۔ ان کے پاس بیٹھنے سے یہ معلوم ہوتا تھا کہ کوئی چیز ہم پر اثر کر رہی ہے۔ درگزر کا یہ عالم تھا کہ کوئی ان سے کیسی ہی بدمعاملگی اور بدسلوکی کیوں نہ کرے ان کے تعلقات میں کبھی فرق نہ آتا ۔ جب ملتے تو اسی شفقت اور عنایت سے پیش آتے۔ اور کیا مجال اس بدسلوکی اور بدمعاملگی کا ذکر زبان پر آنے پائے۔ ایسے لوگ جن سے ہر کوئی حذر کرتا جب ان سے ملنے آتے تو ان کے حسن سلوک اور محبت کا کلمہ پڑھتے ہوئے جاتے تھے۔

سوالنمبر4۔ **کسی ایک نثر پارے کی تلخیص کیجئے۔** (10)

مسلمانوں کے مصائب اگر تمام تر اقتصادی ہوتے تو بھی ان کا حل آسان نہ تھا۔ لیکن اس زمانے میں انہیں جو نئے نئے مسائل پیش آرہے تھے وہ زندگی کے ہر شعبے سے متعلق تھے۔ اقتصادی اور ذہنی پستی کی اصلاح کے لئے ضروری تھا کہ مسلمان انگریزی تعلیم حاصل کریں اوروہ اس سے بدکتے تھے۔ اب تک ان کی ادبی زبان فارسی رہی تھی لیکن اس زبان کا مستقبل تاریک تھا اور اُردو میں غزل گو شعراء کے دواوین کے سوا کوئی قابل ذکر لٹریچر نہ تھا۔ نثر میں بھی گنتی کی چند کتابیں تھیں جن میں علمی مسائل پیش کرنے کی صلاحیت نہ آئی تھی۔ اُردو شاعری بھی نقائص سے پُر تھی اور قوم کی نشو نما میں کسی طرح کارآمد نہ ہو سکتی تھی۔

یا

اُردو ادب کی تین اصناف یعنی افسانہ ، شاعری اور تنقید کو نہ صرف اس تحریک نے متاثر کیا بلکہ ادب کی ہیت اجتماعیہ کو انسانی شعور سے رہنمائی حاصل کرنے ، سائنسی انداز میں تجزیہ کرنے اور ان دونوں کے امتزاج سے زندگی کی بصیرتوں کو نئے مفاہیم نکھارنے کی قوت عطاکی ۔ اس تحریک نے منطقی استدلال اور حقیقت پسندانہ تجزیے کو فروغ دیا اور معاشی حقائق کو تسلیم کر کے استحصالی قوتوں کی نشاندہی کی ۔ اس تحریک کے مقاصد میں عوام کی بہبودی اور ایک خوش حال معاشرے کی تعمیر کو فوقیت حاصل تھی۔ چنانچہ بلند انسانیت میں اعتقاد اور کچلے ہوئے عوام کو ایک باعظمت مقام دلانے کی خواہش نے نئے ادباء کو اس تحریک کی طرف متوجہ کیا ۔

سوالنمبر5۔ **کسی ایک موضوع پر سیر حاصل مضمون لکھیئے۔** (20)

(الف) ماحولیات اور ادب

(ب) اُردو افسانے پر ترقی پسند تحریک کے اثرات

(ج) اُردو شاعری میں سائنسی شعور

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FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION-2023
FOR RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT

Roll Number

ZOOLOGY

TIME ALLOWED: THREE HOURS	PART-I (MCQS)	MAXIMUM MARKS = 20
PART-I(MCQS): MAXIMUM 30 MINUTES	PART-II	MAXIMUM MARKS = 80

NOTE: (i) Part-II is to be attempted on the separate **Answer Book.**
(ii) Attempt **ONLY FOUR** questions from **PART-II**. **ALL** questions carry **EQUAL** marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.

PART-II

Q. No. 2. Dengue over the years has expanded significantly. Give a comprehensive management plan to reduce the disease burden. **(20)**

Q. No. 3. Migration is one of the most widespread characters of some of the chordates. Discuss. **(20)**

Q. No. 4. Cell to organism. How does this natural phenomena happen? **(20)**

Q. No. 5. What are enzymes and coenzymes? Discuss their role in life of the organism and the activities that are dependent upon them. **(20)**

Q. No. 6. Biogeochemical cycles are dependent on natural elemental sources for improving sustainability of ecosystems. How do these ecological drivers work and what is their impact on the environment? **(20)**

Q. No. 7. Integument pays a vital role in the survival of individuals. How would you compare the integument of invertebrates and which according to your opinion is the most diversified one and why? **(20)**

Q. No. 8. Make a comparison of feeding and digestion process in carnivores and Herbivores. **(20)**

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