

### FEDERAL PUBLIC SERVICE COMMISSION COMPETITIVE EXAMINATION-2025 FOR RECRUITMENT TO POSTS IN BS-17 UNDER THE FEDERAL GOVERNMENT

Roll Number

## GENERAL KNOWLEDGE-I (GENERAL SCIENCE & ABILITY)

| TIME               | ALLOWED.          | THREE HOUPS                       | (PART_I MCOg)   | MAYIMIIN            | 1 MARKS+ 20                             |
|--------------------|-------------------|-----------------------------------|---|---------------------|---|
| PART               | -I (MCOs)         | MAXIMUM 30 MINUTES                | $\frac{(\mathbf{PART-INCQS})}{(\mathbf{PART-INCQS})}$ | MAXIMUN             | MARKS: 80                               |
| NOTE               | : (i) First atte  | mpt PART-I (MCOs) on sepa         | rate OMR Answer                                       | Sheet which s       | hall be taken back                      |
|                    | after <b>30</b> r | ninutes.                          |   |                     |   |
|                    | (ii) Overwr       | iting/cutting of the options/an   | swers will not be g                                   | given credit.       |   |
|                    | (iii) There is    | no negative marking. All MCC      | Is must be attempte                                   | ed.                 |   |
|                    |                   | PART-I (MCQs)                     | (COMPULSORY)  |                     |   |
| 0 1 <i>(</i> i) Se | lect the best or  | ntion/answer and fill in the app  | ropriate Box 🗖 on t                                   | the <b>OMR Answ</b> | ver Sheet (20x1=20)                     |
| (ii) A             | Answers given     | anywhere else, other than OMI     | R Answer Sheet, wil                                   | ll not be conside   | ered.                                   |
| ()                 |                   |                                   |   |                     |   |
| 1. <b>'Blue</b>    | dwarfs' and '     | Red giants' respectively refer    | to:   |                     |   |
| (A) M              | loons of Jupite   | r (B) Young star and Old sta      | r (C) Old star and                                    | Young star          | (D) None of thes                        |
| 2. Most r          | najor Tsunan      | nis are produced by earthqua      | kes with hypocente                                    | ers less than:      |   |
| (A) 30             | ) km              | (B) 40 km                         | (C) 50 km   |                     | (D) None of thes                        |
| 3. Which           | of the follow     | ing source of energy is caused    | by uneven heating                                     | g of earth's sur    | face?                                   |
| (A) W              | vind              | (B) Solar                         | (C) Biomas  | SS                  | (D) None of thes                        |
| 4. Globa           | l winds towar     | ds western direction are know     | vn as:  |                     |   |
| (A) T1             | rade winds        | (B) Western winds                 | (C) Reynol  | ds wind             | (D) None of thes                        |
| 5. Perina          | ital transmissi   | ion is said to occur when a pa    | thogen is transmit                                    | ted from:           |   |
| (A) N              | on-human to h     | uman (B) Infected to uninfe       | ected (C) Mother                                      | to infant           | (D) None of thes                        |
| 6. Which           | of the plant      | group needs both land and wa      | ter to complete th                                    | eir life cycle?     |   |
| (A) B1             | ryophyta          | (B) Tracheophyta                  | (C) Thallog   | ohyta               | (D) None of thes                        |
| 7. Maxin           | num amount o      | of carbohydrates are obtained     | l from:   |                     |   |
| (A) N              | uts               | (B) Plant oil                     | (C) Whole   | grain food          | (D) None of thes                        |
| 8. Which           | of the follow     | ing class has the largest numl    | per of animals?                                       |                     |   |
| (A) Fi             | shes              | (B) Insects                       | (C) Mamm  | als                 | (D) None of thes                        |
| 9. The pi          | rocess of prese   | erving meat by stewing in a co    | overed earthenwar                                     | e jug is called:    |   |
| (A) B              | urial             | (B) Jugging                       | (C) Curing  |                     | (D) None of thes                        |
| 10. All or         | perating system   | ms get their total memory ini     | tialized from:  |                     |   |
| (A) B              | SIOS              | (B) RAM                           | (C) ROM   |                     | (D) CPU                                 |
| 11. <b>The</b> a   | mount of data     | a transmitted for a given amo     | unt of time is calle                                  | d:                  |   |
| (A) N              | loise             | (B) Bandwidth                     | (C) Freque  | ncy                 | (D) None of thes                        |
| 12. Whic           | h of the follov   | ving products can be prepare      | d using raw guava                                     | ?                   |   |
| (A) Ja             | am                | (B) Jelly                         | (C) Both (A   | A) and (B)          | (D) None of thes                        |
| 13. Whic           | h of the follov   | ving is used as a stabilizer in i | ce cream?   | , , ,               |   |
| (A) S              | ugar              | (B) Milk                          | (C) Gelatin   | 1                   | (D) None of thes                        |
| 14. In the         | e structure of    | fiber, the light is guided throu  | ugh the core due to                                   | o total internal:   |   |
| (A) R              | eflection         | (B) Refraction                    | (C) Diffrac   | tion                | (D) None of thes                        |
| 15. Who            | is known as tl    | he inventor of Artificial Intell  | igence?   |                     |   |
| (A) C              | harles Babbag     | e (B) John McCarthy               | (C) Alan T  | uring               | (D) None of thes                        |
| 16. Whic           | h of the follow   | ving is the common language       | for Artificial Intell                                 | ligence?            |   |
| (A) Ja             | va                | (B) Python                        | (C) Lisp  | 0                   | (D) None of thes                        |
| 17. Ceme           | ent factory lab   | ourer are prone to:               |   |                     | < /                                     |
| (A) Le             | eukemia           | (B) Cytosilicosis                 | (C) Bone n  | narrow              | (D) None of thes                        |
| 18. The f          | astest enzvme     | is:                               |   |                     | < /                                     |
| (A) P              | epsin             | (B) DNA polymerase                | (C) Carbon  | nic anhvdrase       | (D) None of thes                        |
| 19. Proce          | ss of adding v    | vitamins to milk is known as:     | (-)   |                     | ( ) = = = = = = = = = = = = = = = = = = |
| (A) F              | lavoring          | (B) Fortification                 | (C) Fermer  | ntation             | (D) None of thes                        |
| 20. The v          | vaves which a     | re used for line of sight (LOS    | ) communication a                                     | re called:          | (-) 1.5110 01 0100                      |
| (A) S              | pace waves        | (B) Cable waves                   | (C) Antenn  | a waves             | (D) None of thes                        |
| () 0               | 1                 | (_)                               | ****  | De De               | (-) f $(-)$                             |

# <u>PART – II</u>

- **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.

## (SECTION – A)

- Q.2. (a) What effects are produced due to Rotation & Revolution of Earth? Explain (5) briefly.
  - (b) Describe Electromagnetic Radiations. Give its types and explain their applications. (5)
  - (c) What are Hurricanes? How they are formed and what level of damage they can (5) produce?
  - (d) Explain the advantages and disadvantages of nitrogen containing fertilizers and (5) (20) insecticides.
- Q.3. (a) Explain how temperature and light intensity affect the rate of photosynthesis in (5) plants.
  - (b) Describe the structure and functions of capillaries in the human blood circulatory (5) system.
  - (c) What is hepatitis? Give its types and briefly explain its common symptoms along (5) with preventions.
  - (d) Differentiate between biomass and biogas. Briefly explain various methods for (5) (20) obtaining energy from biomass.
- Q. 4. (a) What is deforestation? State the disadvantages caused to the environment due to (5) this.
  - (b) Explain how water pollution is produced? Describe the part played by bacteria after (5) a river has been polluted by sewage.
  - (c) State some examples of pollution caused by human activity and discuss the effects (5) of each example.
  - (d) What does air pollution means? State ten serious effects of air pollution on the (5) (20) environment and briefly explain how they can be reduced?
- Q. 5. (a) Differentiate between food contaminants and food adulterants. (5)
  - (b) Enlist major food groups based on nutrients, their functions and sources. (5)
  - (c) What is Artificial Intelligence and how does it differ from traditional programming? (5) Describe the main branches of Artificial Intelligence.
  - (d) What are the advantages of optical fibers in communication system? Draw basic (5) (20) structure of optical fiber and explain propagation of light through it.

### (SECTION – B)

- Q. 6. (a) In an annual sale, Saima buys a Fridge and a Freezer. The sale offers 15% off (5) everything and she pays a total of Rs. 57,120/-. If the price of a freezer, before the sale, is Rs. 40,000/. What was the price of the Fridge before the sale?
  - (b) Mr. Rasheed pays a deposit of Rs. 60,000/- followed by 36 equal monthly (5) payments. The total amount that he pays is 127% of the basic price of Rs. 3,360,000/-. Calculate Rasheed's monthly payment.
  - (c) Divide Rs. 600/=among A, B and C so that Rs. 40 more than 2/5 of A's share, (5) Rs. 20 more than 2/7 of B's share and Rs. 10 more than 9/17 of C's share may be equal.
  - (d) Find out the correct words from the jumbled spellings given below. (5) (20)
    (i) TEANAIRM (ii) VAGNACEXETRA (iii) VADIELTIONC
    (iv) PKUNYBARTC (v) TAESROSNC Page 2 of 3

- Q.7 (a) Calculate the marked price of the sculpture if it is sold for Rs.79950/- after a discount of (5) 18%. On another day, if 10% discount is given on the marked price of the same sculpture before it is sold at a further discount of 8%. Would the sale price still be Rs.79950/-?
  - (b) Majid pays a total of Rs.51520/- for his car insurance. The total is made up of a basic (5) charge plus 15% sales tax. Calculate the amount of sales tax that Majid pays.
  - (c) A camp site in the shape of a rectangle has sides (3x+6) m and (x+1) m and the length of (5) the diagonal is (4x+1) m. Find the area and the perimeter of the camp site.
  - (d) Arrange the following fractions in the descending order. (a)  $\frac{7}{12}, \frac{4}{7}, \frac{9}{14}, \frac{25}{42}$  (b)  $\frac{5}{8}, \frac{7}{12}, \frac{5}{9}, \frac{13}{24}$  (c)  $\frac{6}{35}, \frac{5}{21}, \frac{2}{7}, \frac{4}{15}$ (d)  $\frac{2}{5}, \frac{6}{11}, \frac{7}{15}, \frac{9}{20}, \frac{13}{25}$  (e)  $\frac{1}{5}, \frac{2}{7}, \frac{3}{8}, \frac{4}{13}, \frac{5}{17}$
- Q. 8. (a) A train in first five successive minutes from its start runs 68m, 127m, 208m, (5) 312m and 535m and for next 5 minutes maintains an average speed of 33km/hr. Find the whole distance covered and the average speed in covering this total distance.
  - (b) A solid cuboid with base 10cm by 6cm is available. The height of the cuboid is (5) 'y' centimeter and the total surface area of the cuboid is given to be 376cm<sup>2</sup>. Find the height of the cuboid.
  - (c) In a six member family (A, B, C, D, E and F), there are two fathers, three (5) brothers and a mother. If C is the sister of F, B is the brother of E's husband. D is the father of A and grandfather of F. Who is E's husband?
  - (d) How many prime numbers are between each of the following pairs of numbers? (5) (20)
    - a)  $\sqrt{3}$  and  $\sqrt{120}$
    - b)  $\sqrt[2]{10}$  and  $\sqrt[2]{410}$
    - c)  $\sqrt[3]{10}$  and  $\sqrt[3]{999}$
    - d)  $\sqrt[3]{28}$  and  $\sqrt{120}$
    - e)  $\sqrt[2]{8}$  and  $\sqrt{400}$

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(5)(20)