

**AGA KHAN UNIVERSITY EXAMINATION BOARD**

**SECONDARY SCHOOL CERTIFICATE**

**CLASS IX EXAMINATION**

**APRIL/ MAY 2017**

**General Mathematics Paper I**

**Time: 40 minutes    Marks: 30**

**INSTRUCTIONS**

1. Read each question carefully.
2. Answer the questions on the separate answer sheet provided. DO NOT write your answers on the question paper.
3. There are 100 answer numbers on the answer sheet. Use answer numbers 1 to 30 only.
4. In each question there are four choices A, B, C, D. Choose ONE. On the answer grid black out the circle for your choice with a pencil as shown below.

Correct Way		Incorrect Ways	
1		1	
		2	
		3	
		4	

**Candidate's Signature**

5. If you want to change your answer, ERASE the first answer completely with a rubber, before blacking out a new circle.
6. DO NOT write anything in the answer grid. The computer only records what is in the circles.
7. You may use a simple calculator if you wish.

1. 250% of 25 is equal to
  - A. 122.5
  - B. 62.5
  - C. 12.25
  - D. 6.25
2. 3.5% expressed as a decimal number is
  - A. 0.0035
  - B. 0.035
  - C. 3.5
  - D. 350
3. A jar contains 250 g of cereal. If Fahad eats 30% of the cereal, then the remaining cereal in the jar is
  - A. 75 g
  - B. 150 g
  - C. 175 g
  - D. 220 g
4. A man owns a land worth Rs 600,000. If he has only two sons and a daughter among his legal heirs, the inheritance of daughter is  
(Note: The share of son is two times that of daughter.)
  - A. Rs 120,000
  - B. Rs 150,000
  - C. Rs 200,000
  - D. Rs 300,000
5. Asad earns Rs 325,000 from his rice field and Rs 200,000 from his cotton field in a certain year. The amount of Usher he has to pay this year is  
(Note: Rate of Usher is 10% of the earning.)
  - A. Rs 525,000
  - B. Rs 325,000
  - C. Rs 52,500
  - D. Rs 12,500
6. A gold chain bought for Rs 50,000 is sold at a profit of Rs 18,500. The percentage profit is
  - A. 10.3%
  - B. 2.7%
  - C. 37%
  - D. 58.7%

7. Sajid bought a car for Rs 550,000 and later sold it at a loss of 20%. The loss incurred is
- A. Rs 10,000
  - B. Rs 11,000
  - C. Rs 100,000
  - D. Rs 110,000
8. In a sale, a shopkeeper reduced the marked price of the goods by 12%. If the marked price of a diary was Rs 200, then its price in sale is
- A. Rs 166
  - B. Rs 176
  - C. Rs 188
  - D. Rs 196
9. A person insured his car at an assessed market price of Rs 900,000. The annual premium is 7% of the assessed market price. The annual premium paid is
- A. Rs 6,300
  - B. Rs 7,470
  - C. Rs 63,000
  - D. Rs 74,700
10. Sumaira deposited Rs 10,000 in her account. If the bank pays simple interest at the rate of 4% per year, the interest she gets after 3 years is
- A. Rs 1,200
  - B. Rs 2,400
  - C. Rs 12,000
  - D. Rs 24,000
11. A car rental service charges Rs 450 for the first 10 kilometres and Rs 15 for each additional kilometre. If Kiran travels 23 km using this car service, she has to pay
- A. Rs 465
  - B. Rs 645
  - C. Rs 680
  - D. Rs 795
12. Zafar purchases a laptop and makes a down payment of Rs 30,000. If he pays the remaining amount in two monthly instalments of Rs 11,000 each, then the total cost price of the laptop is
- A. Rs 19,000
  - B. Rs 22,000
  - C. Rs 41,000
  - D. Rs 52,000
13. Wahid paid income tax of Rs 1,400 for the month of February. If his taxable income for the month is Rs 40,000, then the rate of income tax is
- A. 0.035%
  - B. 0.35%
  - C. 3.5%
  - D. 35%

14. A cellular company pays Rs 200 per hour and an additional commission of Rs 30 on the sale of each SIM to its sales person. If a sales person sold 4 SIMs in 3 hours, then the company will pay him
- A. Rs 320
  - B. Rs 630
  - C. Rs 720
  - D. Rs 890
15. When the annual income exceeds Rs 400,000, income tax of 5% is applicable on the exceeding amount. The annual income tax of a person having an annual salary of Rs 850,000 is
- A. Rs 22,500
  - B. Rs 20,000
  - C. Rs 42,000
  - D. Rs 42,500
16. In an electric bill, the previous metre reading was 861512 units and current reading is 862514 units. If energy charges are Rs 9 per unit excluding all other charges, then the total amount of energy charges will be
- A. Rs 9,515
  - B. Rs 9,018
  - C. Rs 2,563
  - D. Rs 1,113
17. The exponential form of  $\sqrt[3]{25}$  is
- A.  $5^{\frac{3}{2}}$
  - B.  $5^{\frac{2}{3}}$
  - C.  $5^{\frac{1}{3}}$
  - D.  $5^{\frac{1}{2}}$
18. The ordinary form (common form) of the scientific notation  $2.63 \times 10^4$  is
- A. 0.000263
  - B. 0.00263
  - C. 2630
  - D. 26300

19. If  $\log_{1+a} a^2 = 1$ , then
- A.  $a^2 = 1$
  - B.  $a^2 = 2 + 2a$
  - C.  $a^2 = 1 + a$
  - D.  $a^2 = 1 - a$
20. If the  $n^{\text{th}}$  term of a sequence is  $a_n = 5 - 3n$ , then the  $10^{\text{th}}$  term of this sequence is
- A.  $-35$
  - B.  $-25$
  - C.  $20$
  - D.  $25$
21. The geometric mean of 2 and 7 is
- A.  $\pm 4.5$
  - B.  $\pm 5.5$
  - C.  $\pm \sqrt{5}$
  - D.  $\pm \sqrt{14}$
22. In a geometric sequence having  $n$  terms, if the first term is 45 and the common ratio is  $\frac{1}{2}$ , then the general term of this sequence is
- A.  $45 + \left(\frac{1}{2}\right)^{n-1}$
  - B.  $45 \times \left(\frac{1}{2}\right)^{n-1}$
  - C.  $45 + (n-1)\left(\frac{1}{2}\right)$
  - D.  $45 \times (n-1)\left(\frac{1}{2}\right)$
23. Which of the following represents the COMPLETE set of integers?
- A.  $\{1, 2, 3, 4, \dots\}$
  - B.  $\{0, 1, 2, 3, \dots\}$
  - C.  $\{\pm 1, \pm 2, \pm 3, \pm 4, \dots\}$
  - D.  $\{0, \pm 1, \pm 2, \pm 3, \pm 4, \dots\}$

24. If  $A = \{11, 13, 15, 17, 19\}$  and  $B = \{12, 14, 16, 18\}$  then  $A - B$  is equal to
- A.  $\{ \}$
  - B.  $\{12, 14, 16, 18\}$
  - C.  $\{11, 13, 15, 17, 19\}$
  - D.  $\{11, 12, 13, 14, 15, 16, 17, 18, 19\}$
25. If  $A = \{a, b, c, d, e\}$  and  $B = \{d, e, f\}$ , then  $A \cap B$  is equal to
- A.  $\{d, e\}$
  - B.  $\{d, e, f\}$
  - C.  $\{a, b, c, f\}$
  - D.  $\{a, b, c, d, e, f\}$
26. If a relation from one set to another set is  $\{(1, 2), (3, 5), (4, 6), (4, 9)\}$ , then the domain of this relation will be
- A.  $\{1, 3, 4\}$
  - B.  $\{2, 6, 9\}$
  - C.  $\{1, 3, 4, 4\}$
  - D.  $\{2, 5, 6, 9\}$
27. The line  $y=10$  is parallel to
- A.  $x$ -axis and passes through point  $(0, 10)$ .
  - B.  $y$ -axis and passes through point  $(10, 0)$ .
  - C.  $x$ -axis and passes through point  $(10, 0)$ .
  - D.  $y$ -axis and passes through point  $(0, 10)$ .
28. The point  $(-9, 8)$  lies in
- A. quadrant I.
  - B. quadrant II.
  - C. quadrant III.
  - D. quadrant IV.
29. If the minimum value and the range of a data set are 10 and 40 respectively, then the maximum value will be
- A. 10
  - B. 30
  - C. 40
  - D. 50
30. If the average of 6 numbers is 12, then the sum of these 6 numbers is
- A. 72
  - B. 70
  - C. 21
  - D. 20

Please use this page for rough work

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