ATOMIC ENERGY EDUCATION SOCIETY

MULTIPLE CHOICE QUESTION TEST (AUGUST 2019)

Time: 1 hr. Class: X, MATHEMATICS MM: 40

Name:_____ Class/Sec: _____ Roll No:_____

Invigilator's Sign:_____

Instruction: Write the correct option in the bracket ( ) given against the corresponding question.

1. A ---------- is a proven statement used for proving another statement.
a) axiom b) lemma c) theorem d) postulate ( )

2. Product of the greatest power of each prime factor involved in the numbers gives the _____ of the numbers.
a) HCF b) LCM c) lemma d) prime factorization ( )

3. For any two positive integers 'a' & 'b', if the least prime factor of 'a' is 2 & the least prime factor of 'b' is 7, then the least prime factor of (a+b) is:
a) 3 b) 7 c) 9 d) 2 ( )

4) HCF of the smallest prime number and the smallest odd composite number is:
a) 1 b) 2 c) 3 d) 18 ( )

5. $2-\sqrt{9}$ is a:
a) rational number b) irrational number
c) natural number d) none of the options ( )

6. For some positive integer 'm', every even integer is of the form:
a) m b) 2m c) 2m + 1 d) m + 1 ( )

7. Decimal representation of — will terminate after _____ decimal places
a) 3 b) 2 c) 4 d) 6 ( )

8. A cubic polynomial can have at most _____zeros
a) 1 b) 2 c) 3 d) 0 ( )

9. A real number 'a' is called the zero of a polynomial f(x), then:
a) f(a) = 0 b) f(a) = − 1 c) f(a) = 1 d) f(0) = 1 ( )

10. If are the roots of a quadratic equation $x^2 + x + 1 = 0$, then the value of − + − is :
a) 0 b) 1 c) −1 d) 3 ( )

11. The roots of the quadratic equation $x^2-13x+42 = 0$ are:
a) 6,7 b) −6,−7 c) 5,8 d)−5,−8 ( )

12. A quadratic polynomial whose sum of the zeroes is −4 & product of zeroes 4 is:
a) x^2-16 b) x^2+4x+4 c) x^2+4x-4 d) x^2-4x-4 ( )

13. A polynomial of degree five is divided by a quadratic polynomial. If it leaves a remainder 4, then the degree of the remainder is:
a) 1 b) 0 c) either 1 or 0 d) 3 ( )

14. Graphical representation of pair of equations $x - 2y + 3 = 0, 4x + 6y = 5$ represents two
a) parallel lines b) co-incident lines
c) intersecting lines d) intersecting lines intersecting at two points ( )

15. If one of the pair of equations which represents co-incident lines is $4x + 8y + 16 = 0$, then the other equation can be:
a) $x + 2y - 4 = 0$ b) $x + 2y + 4 = 0$ c) $x + 2y - 8 = 0$ d) $x - 2y - 4 = 0$ ( )

16. If the pair of equations $4x + 3y = 10$ & $8x + ky = 20$ have infinite solutions, then the value of k is
a) – 6 b) 6 c) 5 d) 9 ( )

17. If the given pair of linear equations are consistent, then the pair of equations have:
a) always unique solution b) always infinite solutions
c) always no solution d) either a unique solution or infinite solutions ( )

18. Sum of the ages of father & a daughter is 47. If the father is 7 years more than thrice the age of his daughter, then the present age of the daughter is:
a) 12 years b) 14 years c) 10 years d) 11 years ( )

19. If am = bl, then the pair of equations $ax + by = c$ & $lx + my = n$ has:
a) no solution b) unique solution
c) infinite solutions d) both the options 'a' & 'b' ( )

20. The positive root of $\sqrt{\quad} = 9$ is:
a) 3 b) 6 c) 5 d) 0 ( )

21. The value of k if $kx(x - 2) + 6 = 0$ has equal roots is:
a) 4 b) 6 c) 24 d) – 2 ( )

22. When 12 is divided into 2 parts such that their product is 32, then the two parts are:
a) 4 & 8 b) 1& 12 c) 5 & 7 d) 6 & 6 ( )

23. If the difference of the roots of the quadratic equation $x^2 - ax + 1 = 0$ has two distinct real roots, then
a) $|a| = 2$ b) $|a| < 2$ c) $|a| > 2$ d) 0 ( )

24. If the sum of first m terms of an A.P. is $2m^2 + 3m$, then its second term is:
a) 5 b) 8 c) 19 d) 9 ( )

25. Mathematician who derived a formula for solving a quadratic equation by the method of completing the square is:
a) Brahma Gupta b) Sridharacharya c) Euclid d) Al-Khwarizmi ( )

26. The roots of the quadratic equation $2x^2 - 4x + 3 = 0$ are
a) real & equalroots b) real & unequal roots
c) imaginary roots d) all of these options ( )

27. If p− 1, p + 3, 3p – 1 are in A.P. then the value of p is:
a) 2 b) – 4 c) 4 d) – 2 ( )

28. The sum of first 'n' terms of odd natural numbers is
a) n(n+1) b) n^2 c) ——— d) 2n – 1 ( )

29. Number of natural numbers between 1 & 1000 which are divisible by 5 is:
a) 197 b) 198 c) 199 d) 200 ( )

30. If the sequence $a_n = 2n + 1$ is in A.P. then its 'a' &' d' are:
a) 2 & 3 b) 1 & 2 c) 2 & 4 d) 3 & 2 ( )

31. 10^{th} term of the A.P. 3, 0, − 3,……. is
a) 20 b) −24 c) −54 d) 0 ( )

32. If 18, a, b, − 3 are in A. P. , then a+ b is:
a) 10 b) 15 c) – 15 d) 4 ( )

33. The 20^{th} term from the last term of the A.P.3, 8, 13, ……..,253 is :
a) 42 b) 150 c) 158 d) 162 ( )

34. ΔABC & Δ DEF are similar triangles. If
a) 40° b) 60° c) 80° d) 100° ( )

35. The same ratio of the corresponding sides of any two similar polygons is referred to as:
a) Representative fraction b) Decimal fraction
c) Suppressive fraction d) Scale fraction ( )

36. The ratio of the corresponding sides of two similar triangles is 4:5, then the ratio of their medians is :
a) 4 : 5 b) 16 : 25 c) 2 : √5 d) 5 : 4 ( )

37. Perimeters of two similar triangles ΔXYZ & Δ PQR are 60 cm & 48 cm respectively. If QR = 8 cm then YZ =
a) 10 cm b) 12 cm c) 5.2cm d) 11.4cm ( )

38. Length of the altitude of an equilateral triangle with a side 3√3 cm is:
a) 3 cm b) 4 cm c) 4.5 cm d) 5.5 cm ( )

39 Two isosceles triangles have equal vertex angles and the areas are in the ratio 16: 91, then the ratio of their corresponding medians is :
a) 4 : 9 b) 9 : 4 c) 2 : 3 d) 5 : 2 ( )

40. In a ΔABC, if the internal bisector of $\angle A$ meets BC in D , then :
a) $\frac{AB}{CD} = \frac{BD}{DC}$ b) $\frac{AB}{DC} = \frac{AC}{BD}$ c) $\frac{AB}{AC} = \frac{DC}{AD}$ d) $\frac{AC}{AB} = \frac{BD}{DC}$

ATOMIC ENERGY EDUCATION SOCIETY :: MUMBAI

MCQ TEST –AUGUST -2019

CLASS : X MATHEMATICS TIME: 1 HOUR

DATE: 29.08.2019 MAX.MARKS:40

ANSWER KEY

QUESTION NUMBER	CORRECT OPTION	QUESTION NUMBER	CORRECT OPTION
1	b-lemma	21	b-6
2	b-LCM	22	a-4 & 8
3	a-3	23	c-|a| >2
4	a-1	24	d-9
5	a-rational number	25	b-Sridharacharya
6	b- 2m	26	c- imaginary roots
7	a-3	27	c-4
8	c-3	28	b– n^2
9	a-f(a) = 0	29	d- 200
10	c- (− 1)	30	d- 3 &2
11	a-6 ,7	31	b-24
12	b-x^2 +4x +4 = 0	32	b-15
13	c-either 1 or 0	33	c-158
14	c-intersecting lines	34	c-80°
15	b- x + 2y + 4 = 0	35	a-Representative Fraction
16	b- k = 6	36	a-4 : 5
17	d-either a unique solution or infinite solutions	37	a-10cm
18	c-10 years	38	c-4.5cm
19	a-no solution	39	a- 4 : 9
20	c-5	40	a– $\frac{AB}{CD} = \frac{BD}{DC}$

ATOMIC ENERGY EDUCATION SOCIETY

MULTIPLE CHOICE QUESTION TEST (AUGUST 2019)

STD: X **M.M: 40**
SUBJECT: SCIENCE **TIME: 01 Hours**
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Student Name :	**Section / Roll No :**
Sign of Invigilator:	**Sign of Examiner:**

Choose and write the correct option from the choices given in the [ ].

1 When one unit of electric charge moves from one point to another in an electric circuit, then the amount of work done in Joules is known as : [ ]
(a) Electric current (b) electric resistance
(c) electric conductance (d) potential difference

2 Three resistors are connected in series. Two resistors are of 10 ohm each. The total resistance of the combination is 32 ohm. The value of the third resistor is : [ ]
(a) 10Ω (b) 12Ω (c) 22 Ω (d) 20 Ω

3 An ideal voltmeter would have : [ ]
(a) infinite resistance (b) very low resistance
(c) Resistance equal to the circuit (d) none of these

4 Kilowatt hour is the unit of : [ ]
(a) Power (b) Potential difference (c) Force (d) Electrical energy

5 In series combination, resistance increases due to increase in : [ ]
(a) Area of cross section (b) voltage (c) length (d) current

6 What happens when ammeter is connected in parallel: [ ]
(a) open circuited (b) closed circuited
(c) short circuited (d) the none of these

7 The direction of the force on a current carrying wire placed in a magnetic field depends on: [ ]
(a) direction of the current but not on the direction of the magnetic field
(b) the direction of the magnetic field but not on the direction of the electric current
(c) the direction of the electric current as well as the direction of the magnetic field
(d) none of the above

8 In electric fittings in a house: [ ]
(a) the live wire goes through the switch
(b) the neutral wire goes through the switch
(c) the earth wire goes through the switch
(d) no wire goes through the switch

9 You have a coil and a bar magnet. You can produce an electric current by moving: [ ]
(a) the magnet but not the coil
(b) the coil but not the magnet
(c) either the magnet or the coil
(d) neither the magnet nor the coil

10 A piece of wire of resistance R is cut into 3 equal parts.These parts are then connected in parallel.If the equivalent resistance of this combination is R' then the ratio of R/R' is: [ ]
(a)3:1 (b) 9:1 (c) 1:3 (d) 1:9

11 Two conducting wires of same material and 5 ohm resistance are first connected in series and then in parallel in an electric circuit. The ratio of heat produced in series and in parallel combinations would be: [ ]
(a) 1:4 (b) 1:5 (c) 5:1 (d) 4:1

12 The electrical resistivity of a given metallic wire depends upon: [ ]
(a) its length (b) its area of cross section
(c) nature of the material (d) all of these.

13 What is the minimum resistance which can be made using 5 resistors each of 1/2ohms: [ ]
(a) (1/5) Ω (b) (1/10) Ω (c) 5 Ω (d) 10 Ω

14 Both CO_2 and H_2 gases are [ ]
(a) Heavier than air c) acidic in nature
(b) colourless d) soluble in water

15 The chemical formula of lead sulphate is [ ]
a) Pb_2SO_4 b) $Pb(SO_4)_2$ c) $PbSO_4$ d) $Pb_2(SO_4)_3$

16 In the reaction, $3O_2$ (g) + $2H_2S$ (g) → $2H_2O$ (l) + $2SO_2$ (g) the reducing agent is [ ]
a) O_2 b) H_2O c) H_2S d) SO_2

17 When crystals of lead nitrate are heated strongly in a dry test tube [ ]
a) Crystals immediately melt c) white fumes appear in the tube
b) A brown residue is left d) a yellow residue is left

18 In which of the following, heat energy will be evolved? [ ]
a) Electrolysis of water c) decomposition of AgBr in presence of sunlight
b) Dissolution of NH_4Cl in water d) burning of LPG

19 Which of the following gases can be used for storage of fresh sample of an oil for a long time [ ]
a) Carbon dioxide and Oxygen c) Helium and Oxygen
b) Nitrogen and Helium d) Nitrogen and Oxygen

20 In which of the following pairs, both are acidic salts? [ ]

a) KCl, KNO_3 c) CH_3COONa, K_2CO_3
b) Na_2SO_4, K_2SO_4 d) $CuSO_4$, $AgNO_3$

21 Which of the following is incorrectly matched? [ ]

a) Tomato – tartaric acid c) ant sting – methanoic acid
b) Citrus fruits – citric acid d) curd – lactic acid

22 The aqueous solution of which of the following salt will have higher OH^- ions? [ ]
a) NaCl b) Na2SO4 c) CH3COONa d) none of these

23 Which of the following will not give CO2 on treatment with dilute acid? [ ]

a) Marble b) limestone c) lime d) baking soda

24 Substances exposed to atmosphere at ordinary temperature, lose their water of crystallisation are called as [ ]
a) Hygroscopy b) efflorescence c) deliquescence d) all of these

25 An element 'X' forms a solid oxide which dissolves in water forming solution which turns blue litmus paper red. 'X' is – [ ]

a) Calcium b) copper c) iron d) phosphorus

26 The substance which on treating with chlorine, yields bleaching powder is [ ]
a) Quick lime b) limestone c) slaked lime d) gypsum

27 If tartaric acid is not added in baking powder, the cake will taste bitter due to the presence of [ ]

a) Sodium hydrogen carbonate c) carbon dioxide
b) Sodium carbonate d) some unreacted tartaric acid

28 Carbohydrates in human is stored in the form of [ ]
a) Glycogen b) starch c) glucose d) maltose

29 Lacteals are [ ]
a) Group of blood cells c) both (a) and (b)
b) Lymph vessels d) none of these

30 Amphibians have [ ]

a) 1 - chambered heart c) 3 – chambered heart
b) 2 – chambered heart d) 4 – chambered heart

31 Lipase acts on [ ]

a) Amino acids b) fats c) carbohydrates d) all of these

32 The transport of soluble products of photosynthesis is known as [ ]

a) Evaporation b) translocation c) transpiration d) conduction

33 Photosynthesis is a [ ]

a) Catabolic process
b) parabolic process
c) amphibolic process
d) photochemical process

34 Rhythmic movement of muscles in the lining of gut are known as [ ]

a) Contracting movements
b) Dilating movements
c) peristaltic movements
d) none of these

35 Receptors are specialised tips of [ ]

a) Muscle cells b) glands c) sense organs d) nerve cells

36 The function of sensory nerve is to carry [ ]

a) Message to spinal cord
b) Detect heat / light
c) spinal cord and nerves
d) bones and nerves

37 Growth – related movements are known as [ ]

a) Tropic movements
b) Nastic movements
c) directional movements
d) both (a) and (c)

38 Growth of pollen tubes towards ovules in an example of [ ]

a) Geotropism b) chemotropism c) hydrotropism d) phototropism

39 Insulin helps in [ ]

a) Promoting growth
b) Regulating amount of water
c) regulating fat metabolism
d) regulating blood sugar level

40 The timing and amount of hormone released is regulated by [ ]

a) Pancreas
b) Feedback mechanism
c) pituitary gland
d) endocrine gland

AEES

MCQ ANSWER KEY

CLASS : X SUBJECT : SCIENCE

Q. NO.	CORRECT OPTION	ANSWER
1	d	Potiential difference
2	b	12 Ω
3	a	Infinite resistance
4	d	Electrical energy
5	c	Length
6	c	Short circuited
7	c	Direction of current and field
8	a	Live wire
9	c	Either the magnet or the coil
10	b	9:1
11	a	1:4
12	c	Nature of the material
13	b	1/10 Ω
14	b	Colourless
15	c	$PbSO_4$
16	c	H_2S
17	b	A brown residue is left
18	d	Burning of LPG
19	b	Nitrogen & Helium
20	d	$CuSO_4$, $AgNO_3$
21	a	Tomato – tartaric acid
22	c	CH_3COONa
23	c	Lime
24	b	Efflorescence
25	d	Phosphorus
26	c	Slaked lime
27	b	Sodium carbonate
28	a	Glycogen
29	b	Lymph vessels
30	c	3 – chambered heart
31	b	Fats
32	b	Translocation
33	d	Photochemical process
34	c	Peristaltic movements
35	c	Sense organs
36	a	Message to spinal cord
37	d	Both (a) and (c)
38	b	Chemotropism
39	d	Regulating blood sugar level
40	b	Feedback mechanism

ATOMIC ENERGY EDUCATION SOCIETY
MULTIPLE CHOICE QUESTION TEST (AUGUST – 2019)

CLASS: X **TIME: 1 hr.**
SUBJECT: SOCIAL STUDIES **MAX.MARKS: 40**

Student Name: _____ Section / Roll No: _____

Sign of Invigilator: _____ Sign of Examiner: _____

Instruction: - Write the correct option in the bracket [ ] given against the corresponding question.

1 Workers enjoy job security in [ ]
a) Agriculture sector b) Primary sectore
c) Unorganised sector d) Organised sector

2 Under employment occurs when people [ ]
a) Do not want to work b) are not paid for their work
c) are not skilled d) are working less than they are capable of

3 Which of the following economic activity is not in the tertiary sector? [ ]
a) Banking b) Bee-keeping
c) Teaching d) working in a call centre

4 Which one of the following sectors is the largest employer in India? [ ]
a) Primary b) Secondary c) Tertiary d) IT

5 GDP is the total value of [ ]
a) All the goods and services b) All final goods and services
c) All intermediate goods and services d) All intermediate and final goods and services

6 Resource which can be renewed again are:- [ ]
(a) National Resource (b) Potential Resource
(c) Renewable Resources (d) Stock

7 In which year was the Earth Summit held? [ ]
a) 1990 b) 1991 c) 1992 d) 1993

8 Land degradation due to over irrigation can be seen in the states of:- [ ]
a) Punjab and Haryana b) Assam c) Orissa d) Mizoram

9 Which one of the following state is terrace cultivation practiced? [ ]
a) Punjab b) Haryana c) Uttar Pradesh d) Uttaranchal

10 Which one of the following is the main cause of land and water pollution in India in recent years? [ ]
a) Industrial Effluents b) Chemical Fertilizer
c) Deforestation d) None of them

11 How much percentage of forest area in the country is required according to the National Forest Policy? [ ]
a)33% b) 37% c) 27% d) 31%

12 Which one of the following is responsible for sheet erosion? [ ]
a) Underground water b) Wind c) Glacier d) Water

13 What did the Rowlatt Act, 1919 presume? [ ]
a) Detention of political prisoners without trail b) Forced recruitment in the army
c) Forced manula labour d) Equal pay for equal work

14 What did the term 'picket' refer to? [ ]
a) Stealing from shops b) Import of goods
c) Protest by blocking shop entrances d) Boycott of clothes and goods

15 Where was Gandhi's ashram located? [ ]
a) Dandi b) Sabarmati c) Allahabad d) Nagpur

16 What led to the Civil Disobedience Movement? [ ]
a) Arrival of the Simon Commission b) Working at the firm without payments
c) Violation of Salt Tax by Gandhi d) Fall in demand for agricultural goods

17 Who wrote the ' Vande Matram'? [ ]
a) Bankim Chandra Chatarjee b) Rabindranath Tagore
c) Abanindranath Tagore d) Sardar Vallabhai Patel

18 Which of the following state lead the unification of Germany? [ ]
a) Bavaria b) Prussia c) Rhineland d) Hanover

19 Congress of Vienna took place in the year [ ]
a) 1818 b)1819 c)1815 d) 1805

20 Who was Frederic Sorrieu? [ ]
a) A Philosopher b) A Painter c) A Politician d) A Revolutionary

21 Who hosted the congress of Vienna? [ ]
a) Count Cavour b) Victor Emanuel c) Bismark d) Metternich

22 Main significance of Belgium Model of Power Sharing [ ]
a) Majoritarianism
b) Power shared in all ethnic groups according to their population
c) On the basis of adult franchise
d) None of the above

23 Which of the following community is in majority in Sri Lanka? [ ]
a) Tamil b) Sinhala c) Buddhist d) Hindu

24 Which one of the following is the 3rd tier of government in India? [ ]
a) Community Government b) State Government
c) Panchayati Raj Government d) Central Government

25 Which is the only official language of Sri Lanka? [ ]
a) Tamil b) Malyalam c) Sinhala d) Hindi

26 Where is the parliament of European Union? [ ]
a) Belgium b) Britain c) Germany d) France

27 Which of the following is not a federal country? [ ]
a) India b) Belgium c) USA d) Malaysia

28 When did the Panchayat Raj System become a constitutional entity? [ ]
a) 1992 b) 1991 c) 1993 d) 1998

29 Federal system of government means [ ]
a) a government with two or more levels of government
b) a form of unitary government
c) a form of autocratic government
d) monarchy government

30 What is coalition government? [ ]
a) power shared among different social group
b) power shared among different levels of government
c) power shared among different political parties
d) power shared among different organs of government

31 Percapita Income means [ ]
a) National Income divided by country's population
b) National Income plus country's population
c) Population divided by National Income
d) National Income divided by personal income

32 What does infant mortality rate indicates? [ ]
a) Literate population
b) The number of children that die before the age of one year as a proportion of 1000 live children.
c) The total number of children attending the school
d) The total children born in a year

33 Which of the following things money cannot buy? [ ]
a) Computers b) Buildings c) Books d) Pollution free environment

34 In which Indian state is the infant mortality rate lowest? [ ]
a) Bihar b) Andhra Pradesh c) Kerala d) Punjab

35 Which of the following neighboring country of India ranks higher on the Human Development Index? [ ]
a) Sri Lanka b) Nepal c) Bhutan d) Pakistan

36 Development Goals of different sections of our society can be achieved by [ ]
a) Force b) Democratic Political Process
c) Violent Agitation d) Terrorism

37 Who got the first Nobel Prize in the field of Economics? [ ]
a) Amartya Sen b) Rabindranath Tagore
c) C.V.Raman d) None of the above

38 Which of the following is not an example for biotic resources? [ ]
a) Buildings b) Rose plant c) Tiger d) Bushes

39 Biotic resources means [ ]
a) Living things b) Non-living things c) Minerals d) None of the above

40 You are a part of [ ]
a) Biotic resources b) Abiotic resources c) minerals d) None of the above

KEY

ATOMIC ENERGY CENTRAL SCHOOL

CLASS : X MCQ TEST SUBJECT : SOCIAL STUDIES

TOTAL NO. QUESTIONS: 40 TIME : 1 hr.

1. d. Organised sector
2. d. are working less than they are capable of
3. b. Bee-Keeping
4. a. Primary
5. b. all final goods and services
6. c. Renewable resources
7. c. 1992
8. a. Punjab and Haryana
9. d. Uttaranchal'
10. a. Industrial Effluents
11. a. 33%
12. d. Water
13. a. Detention of political prisoners without trail
14. c. Protest by blocking shop entrances
15. b. Sabarmati
16. c. Violation of Salt Tax by Gandhi
17. a. Bankim Chandra Chatarjee
18. b. Prussia
19. c.1815
20. b. A Painter
21. d. Metternich
22. b. Power shared in all ethnic groups according to their population
23. b. Sinhala
24. c. Panchayati Raj Government
25. c. Sinhala
26. a. Belgium
27. d. Malaysia
28. a. 1992
29. a. a government with two or more levels of government
30. c. power shared among different political parties
31. a. National Income divided by country's population
32. b.The number of children that die before the age of one year as a proportion of 1000 live children
33. d. Pollution free environment
34. c. Kerala
35. a. Sri Lanka
36. b. Democratic Political Process
37. a. Amartya Sen
38. a. Buildings
39. a. Living things
40. a. Biotic resources