

- Q.36** DNA polymerase is extracted from:
- A. Prokaryotes
 - B. Fungi
 - C. Virus
 - D. Bacteria
- Q.37** Organs functionally alike but structurally different are:
- A. Analogous
 - B. Homologous
 - C. Heterologous
 - D. Isologous
- Q.38** Succession end with a diverse and relatively stable:
- A. Xerophyte
 - B. Climax community
 - C. Deserter
 - D. Hydrosere
- Q.39** Nutrients tends concentrate near bottom sediments in:
- A. Desert
 - B. Tundra
 - C. Aquatic ecosystem
 - D. Coniferous forest
- Q.40** As CFCs rise to the atmosphere, the ultraviolet rays release:
- A. Fluorine
 - B. Chlorine
 - C. Carbon
 - D. Hydrogen

ENGLISH

* Complete the sentences by choosing the most appropriate option, from the given lettered choices (A to D) below each.

- Q.41** He says he is a _____, but he can't play the piano or any other instrument and he can't sing.
- A. musician
 - B. magician
 - C. physician
 - D. technician
- Q.42** She hasn't eaten all day, and by the time she got home she was _____.
- A. blighted
 - B. constipated

HEC (PHASE-II) PRACTICE TEST BY MCAT MCQs



INSTRUCTIONS:

- Duration of test is 150 MINUTES (120 Questions).
- There is no any NEGATIVE marking.
- Fill only one circle for each question on given Response sheet. All questions carry equal marks.
- No mobile phones, calculators and wrist watches with calculators are allowed during test.
- After completion of test, please take a clear image of your response sheet and send it to our page by message.
- You can solve the practice test any time before displaying Answer Key.
- Answer Key will be displayed on our page MCAT MCQs (www.facebook.com/mcatmcqs/) on September 17, 2017 at 9:00 AM.
- In the case of any confusion get help from admin.

BIOLOGY

- Q.1** They are the remains or impressions of living organisms preserved in rocks:
A. Tissues
B. Fossils
C. Calcium
D. Statutes
- Q.2** The pushing out of materials by the cell against the concentration gradient is:
A. Low transport
B. Passive transport
C. Active transport
D. Moderate transport
- Q.3** Which of the following organelles is present in both prokaryotic and eukaryotic cells?
A. Chloroplast
B. Ribosomes
C. Mitochondria
D. Golgi Complex
- Q.4** Silk is chemically:
A. Lipid
B. Wax
C. Protein
D. Carbohydrate

Q.13 When calyx and corolla are not distinguishable, they are collectively called:

- A. Perianth
- B. Perigone
- C. Protoplast
- D. Perianth

Q.14 Organisms possessing true body cavity are called:

- A. Acoelomata
- B. Coelomata
- C. Monoblastic
- D. Diphloblastic

Q.15 Which of these belong to protostomes?

- A. Ascaris
- B. Fasciola
- C. Trichinella
- D. Hydra

Q.16 In the photosystem II, high energy electrons of chlorophyll molecule are accepted by:

- A. PC
- B. PQ
- C. NAD
- D. ATP

Q.17 The molecule which actually enters the Krebs cycle is:

- A. Pyruvic acid
- B. Acetyl-CoA
- C. Oxalo acetic acid
- D. Fumaric acid

Q.18 Trypsinogen is activated by:

- A. Chymotrypsin
- B. Enteropeptidase
- C. Trypsin
- D. HCl

Q.19 Pulmonary veins supply blood to heart chamber:

- A. Right atrium
- B. Left atrium
- C. Right ventricle
- D. Left Ventricle

WHATSAPP CHANNEL FOR MORE MEDICAL & EDUCATIONAL INFORMATION

<https://whatsapp.com/channel/0029VaV72IEC1FuDt56bS53Y>

Short link

<https://shorturl.at/CYKMc>

Q.20 Sodium uptake in nephron is promoted by:

- A. Cortisol
- B. Aldosterone
- C. ADH

- Q.5** It is the most abundant carbohydrate in nature:
- A. Glucose
 - B. Fructose
 - C. Cellulose
 - D. Starch
- Q.6** Which of the following forms part of coenzyme:
- A. Diastase
 - B. Lipase
 - C. Vitamin
 - D. Lysine
- Q.7** Which of these chromosomes have centromeres located at one end?
- A. Acrocentric
 - B. Telocentric
 - C. Metacentric
 - D. Sub metacentric
- Q.8** DNA replication occurs in which phase of the cell cycle?
- A. Prophase
 - B. Interphase
 - C. Metaphase
 - D. Telophase
- Q.9** Common cold is caused by:
- A. Bacteria
 - B. Viruses
 - C. Fungi
 - D. Plasmidium
- Q.10** Which of the following is not a viral disease?
- A. Small pox
 - B. Tetanus
 - C. Mumps
 - D. Measles
- Q.11** Which of the following diseases of plants is caused by bacteria?
- A. Rust
 - B. Crown gall
 - C. Sooty
 - D. Powdery mildew
- Q.12** Which of the following is not the normal method of reproduction in fungi?
- A. Fragmentation
 - B. Budding
 - C. Spore formation
 - D. Conjugation

91. Humility:
a. Boldness
b. Shyness
c. Digital
d. Caliber
92. Bestow:
a. Donate
b. Withhold
c. Corrupt
d. Giving
93. Allocate:
a. Conservative
b. Catastrophic
c. Allot
d. Keep Together
94. Conservative:
a. Fearful
b. Firm
c. Changeable
d. Review
95. The apples were overripe so we threw _____ away.
a. It
b. Them
c. This
d. They.
96. His vocabulary is better than _____.
a. Yours
b. Your
c. His
d. Her

97. The policeman is a friend of _____.
a. Me
b. His
c. Mine
d. Her
98. Mrs. Smith always tells her daughter not to marry a (n) _____ man, who lies and cheats.
a. Elegant
b. Dynamic
c. Clumsy
d. Dishonest
99. Teachers like _____ students.
a. Obedient
b. Elegant
c. Irresponsible
d. Fearless
100. We couldn't see the meteor shower because of the _____ weather.
a. Amazing
b. Lucid
c. Unfavorable
d. Dynamic

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77. Which of the diseases is not spread by casual physical contact
- A. Syphilis
 - B. AIDS
 - C. Both A and B
 - D. Neither A nor B
78. Plants make their own food by the process known as _____
- A. Photosynthesis
 - B. Respiration
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CHEMISTRY SECTION

81. Which of the following lists contains only elements ?
- A. Air, water, oxygen
 - B. Hydrogen, oxygen, brass
 - C. Air, water, fire, earth
 - D. Calcium, Sulphur, carbon

**Choose the suitable synonym:
(similar)**

81. Intoxication:
a. perseverance
b. Glorious
c. Drunkenness
d. Luminous

82. Revolutionary:
a. Far-Reaching
b. Abort
c. Consume
d. Look Out

83. Monumental:
a. Layout
b. Propositions
c. Naïve
d. Colossal

84. Grudge:
a. Beneficial
b. Grievance
c. Morality
d. Picaresque

85. Picaresque:
a. Revolutionary
b. Monuments
c. Anecdotal
d. Corrupt

86. Aesthetic:
a. Exquisite
b. Drunkenness
c. Fury
d. Deliverance

87. Repulsive:
a. Abhorrent
b. Terminate
c. Disgrace
d. Voluntarily

**Choose the suitable antonym:
(opposite)**

88. Illustrious:
a. Intimate
b. Forgetful
c. Insignificant
d. Insightful

89. Volatile
a. Variable
b. Light
c. Design
d. Certain

90. Righteous:
a. Angelic
b. Digital
c. Corrupt
d. Layout

97. A ball is thrown vertically upward. Its velocity at the highest point is:

- A. -10ms^{-1}
- B. Zero
- C. 10ms^{-2}
- D. None of these

98. Center of gravity is point at which :

- A. Whole weight acts
- B. Whole energy concentrated
- C. Changes continuously
- D. All of these

99. Which one is the scalar quantity

- A. Velocity
- B. Pressure
- C. Acceleration
- D. Force

100. A ball is dropped from a tower with zero velocity, reaches ground in 4s, the height of the tower is about

- A. 80m
- B. 20m
- C. 160m
- D. 40m

ENGLISH SECTION

Fill in the blanks (pick the right answer)

1. Could you tell me how ____ get to bus station?

- A. to
- B. can
- C. about
- D. with

2. I am looking ____ this school.

- A. On
- B. which
- C. for
- D. that

3. You are going ____ the wrong direction.

- A. in
- B. on
- C. to
- D. at

4. What ____ your father do?

- A. do
- B. to
- C. does
- D. was

5. Will you ____ me with my homework?

- A. suggest
- B. helped
- C. go
- D. help

96. As motor speeds up the value of current decreases because :
- A. Of friction loss
 - B. Increase of resistance of coil
 - C. Back emf increases
 - D. All of these
97. Dimensional representation of Planck's constant is same as :
- A. Gravitational Constant
 - B. Torque
 - C. Momentum
 - D. Angular momentum
98. The deflecting couple in a galvanometer is given by :
- A. NI/AB
 - B. $NAIB$
 - C. ABI/N
 - D. None of these
99. An inductor stores energy in its :
- A. Coil
 - B. Electric field
 - C. Magnetic field
 - D. Both B and C
100. Aluminum is a/an
- A. Photoconductor
 - B. Insulator
 - C. Excellent conductor
 - D. Bad conductor

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- A. Community
- B. Ecosystem
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- C. Veins
- D. Gills

76. Plasma membrane is:

- A. Semi permeable
- B. Permeable
- C. Selectively permeable
- D. Non permeable

57. When raisins are kept in plain water, water enters the raisins because
- A. Raisins do not have water
 - B. Water can enter anywhere
 - C. Raisin contain dilute solution inside
 - D. Raisin contains concentrated solution inside
58. The growth of stem or root increases due to growth of
- A. Lateral meristem
 - B. Apical meristem
 - C. Intercalary meristem
 - D. Girth meristem
59. When external is less diluted than cell sap;
- A. Hypertonic solution
 - B. Hypotonic solution
 - C. Isotonic solution
 - D. Osmosis
60. Cells of Sclerenchyma tissue is dead and hard due to deposits of
- A. pectin
 - B. lignin
 - C. cellulose
 - D. sucrose
61. Xylem consists of _____, _____, Xylem parenchyma and Xylem fibers
- A. Sieve tube, Companion cell
 - B. Tracheid, Sieve tube
 - C. Tracheid, vessel
 - D. Vessel, Companion cell

87. To achieve a good separation the two liquids are gently shaken to increase their area of

- A. miscibility
- B. separation
- C. contact
- D. solubility

88. Chromatography in which stationary phase is solid is called

- A. partition chromatography
- B. paper chromatography
- C. high pressure
- D. adsorption chromatography

89. Premature crystallization of solution of filter paper or in funnel can be avoided

- A. filtering hot saturated solution using hot funnel
- B. filling warm solution
- C. quick filtration
- D. filtering cold solution

90. Safe and reliable method of drying crystal in through :

- A. pressing it between folds of filter paper
- B. drying it in oven
- C. evaporation of solution
- D. vacuum desiccator

PHYSICS SECTION

61. The bending of the light ray is called

- A. Incident
- B. Transverse
- C. Refraction

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89. Chemical formula of sucrose is:

- A. $C_{12}H_{22}O_{11}$
- B. $C_6H_{12}O_6$
- C. CO
- D. H_2O

90. Changes in the state of matter are due to the changes in the _____ of the atoms and molecules :

- A. Motion
- B. Structure
- C. Number
- D. Size

PHYSICS SECTION

91. _____ of light is the change in direction or bending of light when it travels from one transparent medium to another.

- A. Scattering
- B. Refraction
- C. Reflection
- D. None of above

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Short link
<https://shorturl.at/CYKMc>

92. The splitting or separation of white light into its component color is called _____

- A. Refraction
- B. Reflection
- C. Spectrum
- D. None of above

54. If projectile is projected at $0 + 45^\circ$ with initial velocity V_i , then velocity at highest point is
a) None
b) $V_i/2$
c) $V_i/\sqrt{2}$
d) $2V_i/4$
55. Dimensions for light of the year;
a) $[ML]$
b) $[L]$
c) $[M^{1/2}L^1T]$
d) $[L^3]$
56. Which of the following pairs have same dimensions?
a) Work and Power
b) Momentum and impulse
c) Force and Torque
d) Torque and Power
57. A person standing on a rotating platform and his hands lowered. He suddenly outstretches his arms, whether there will be change in the angular momentum?
a) Becomes zero
b) Increases
c) Decreases
d) Remains constant
58. The distance between node and antinode is
a) One wavelength
b) one fourth wavelength
c) one half wavelength
d) Two wavelength
59. If $R_1 = 10 \text{ K } \Omega$ and $R_2 = 100 \text{ K } \Omega$, then the gain of the amplifier is:
a) $1000 \text{ K } \Omega$
b) $10 \text{ K } \Omega$
c) 10
d) -10

49. A normal person can hear the sounds between the frequencies of
- a) 15Hz - 20 Hz
 - b) 20Hz - 20 KHz
 - c) 20Hz - 25 KHz
 - d) 25 Hz - 30 KHz
50. An 8 Volt battery is connected to three resistor, R₁ and R₂ are in series and R₃ is parallel to R₁ and R₂ and parallel to the battery. The current flowing from source is 0.4 Amp, what will be the current flowing through R₃ resistor which is 26 ohms.
- a) 0.3 A
 - b) 20 A
 - c) 3.2 A
 - d) 3.0 A
51. The function of the soft-Iron cylinder which is placed between the poles of the magnet in a D.C motor
- a) To decrease the speed of motor
 - b) To increase the induced IMF
 - c) To move the coil in one direction
 - d) To increase the force acting on the coil
52. Why gravitational force is not responsible to produce torque in the satellite because torque is;
- a) Zero
 - b) 180°
 - c) 90°
 - d) 45°
53. If the slope of the Velocity Time Graph remains constant then body is moving with;
- a) Uniform acceleration
 - b) Negative variable acceleration
 - c) Variable acceleration
 - d) Uniform Velocity

19. Drugs and alcohol _____ together to _____

both man and women.

- a) result, aggr. wate
- b) mix, lower
- c) act, increase
- d) put, arrest

20. The _____ words of the mother comforted the _____ child.

- a) harsh, naughty
- b) sweet, happy
- c) soothing, disappointed
- d) beautiful, angry

Chemistry

21. The important application used for making ice cream with the use of NaCl ;

- a) constitutive property
- b) additive property
- c) colligative property
- d) Roault's law

22. Which one of the following solutions will have highest vapour pressure than that of water

- a) aqueous solution of CH₃OH
- b) aqueous solution of H₂SO₄
- c) aqueous solution of sugar
- d) aqueous solution of urea

23. Which one of following is not soluble in alcohol?

- a) KCl
- b) Urea
- c) Acetone
- d) Ether

24. Which one of following is not a conjugate solution?

- a) ether + water
- b) phenol + water
- c) nicotine + water
- d) ethanol + water

79. In frog, exchange of gasses takes place through :

- A. Lungs
- B. Tail
- C. Eyes
- D. Feet

80. Synovial joints are termed as a

- A. Immovable
- B. Amphiarthrotic
- C. Diarthroses
- D. None of these

CHEMISTRY SECTION

81. Which of the following is not a crystal?

- A. Diamond
- B. Copper Sulphite
- C. Clay
- D. Sugar

82. The composition by volume of hydrogen and oxygen in water (H_2O) is _____ via electrolysis of water :

- A. 2:1
- B. 3:1
- C. 1:1
- D. 0:1

83. The value of Avogadro's number is _____

- A. 3.44×10^{32}
- B. 6.022×10^{23}
- C. 5.44×10^{23}
- D. 4.04×10^{19}

- B. 16 amu
- C. 17 amu
- D. 18 amu

Q.64 Identify "X" in the reaction given below:



- A. $\text{CH}_3\text{CH}_2\text{Br}$
- B. $\text{CH}_2\text{CH}_2\text{Br}$
- C. $\text{CH}_3\text{CH}_2\text{Br}$
- D. $\text{CH}_2\text{CH}_2\text{Br}$

Q.65 f-block elements from Ac to Lr are called:

- A. Lanthanides
- B. Actinides
- C. Outer transition
- D. Both B & C

Q.66 Surface tension of benzene at 20°C is:

- A. 72.58 J
- B. 22.03
- C. 28.88
- D. 471.6

Q.67 Alkali metals can be obtained in the free state by:

- A. Electrolysis of fused salts
- B. Addition reaction
- C. Oxidation
- D. Solvay process

Q.68 Which halogen molecule "X₂" has lowest dissociation energy?

- A. F₂
- B. Cl₂
- C. Br₂
- D. I₂

Q.69 The anomalous electronic configuration shown by chromium and copper among 3-d series of elements is due to:

- A. Colour of ions of these metals
- B. Stability associated with this configuration
- C. Variable oxidation states of metals
- D. Complex formation tendency of metals

Q.70 Which one of the following is NOT a nucleophile?

- A. NH_2^-
- B. BF_3
- C. H_2O

13 - 10 - 2019

MED - White

1	D	26	D	51	D	76	B
2	C	27	A	52	A	77	A
3	D	28	A	53	A	78	A
4	B	29	B	54	C	79	D
5	A	30	B	55	B	80	B
6	D	31	C	56	B	81	D
7	C	32	A	57	D	82	C
8	A	33	A	58	B	83	B
9	B	34	A	59	D	84	C
10	A	35	C	60	C	85	D
11	C	36	C	61	D	86	B
12	B	37	C	62	C	87	A
13	C	38	B	63	C	88	A
14	B	39	A	64	A	89	C
15	B	40	C	65	D	90	B
16	A	41	D	66	A	91	C
17	D	42	A	67	C	92	A
18	A	43	B	68	D	93	B
19	C	44	B	69	B	94	B
20	C	45	A	70	C	95	C
21	C	46	B	71	C	96	D
22	D	47	D	72	C	97	A
23	A	48	B	73	D	98	C
24	D	49	B	74	D	99	A
25	D	50	A	75	C	100	C

D. CH_3^+

Q.71 Which one of the following test is given by both aldehyde and ketone?

- A. Silver mirror test
- B. 2, 4 DNP/H test
- C. Fehling's solution test
- D. Benedict's solution test

Q.72 Barat exists in nature as:

- A. $\text{Na}_2\text{H}_2\text{O}_2 \cdot 10\text{H}_2\text{O}$
- B. $\text{Na}_2\text{H}_2\text{O}_2 \cdot 5\text{H}_2\text{O}$
- C. $\text{Na}_2\text{H}_2\text{O}_2 \cdot 3\text{H}_2\text{O}$
- D. $\text{Na}_2\text{H}_2\text{O}_2 \cdot \text{H}_2\text{O}$

Q.73 The amount of energy released by absorbing an electron in the valence shell is:

- A. Ionization Energy
- B. Electron Affinity
- C. Atomic Radius
- D. Atomization Energy

Q.74 Rate of $\text{K}[\text{N}_3\text{O}_2]$ has _____ of reaction:

- A. First order
- B. Pseudo first order
- C. Second order
- D. Third order

Q.75 The most dense element is:

- A. Li
- B. K
- C. Ca
- D. Ba

Q.76 Which one of the following molecules has shortest distance of carbon atoms?

- A. $\text{CH}_3 - \text{CH}_3$
- B. $\text{CH}_2 = \text{CH}_2$
- C. $\text{CH} \equiv \text{CH}$
- D. $\text{CH}_3 = \text{CH} - \text{CH}_3$

Q.77 Which of the following elements has the lowest electronegativity?

- A. Cesium
- B. Strontium
- C. Calcium
- D. Barium

Q.78 Ketone reacts with Grignard's reagent in acidic medium forming:

52. Function of xylem and phloem
- A. Protection
 - B. Conduct water and food
 - C. Transport gases
 - D. To support plant
53. Chromoplasts are plant pigments which give _____
- A. green
 - B. No color
 - C. Color other than green
 - D. All of the above
54. Lysosome is called suicide bag of the cell
- A. It causes any cell to commit suicide
 - B. It's enzyme digest the cell itself
 - C. It kills surrounding cells
 - D. All of the above
55. The difference between plant cell and animal cell is that
- A. Plant cell have cell wall which animal cell do not
 - B. Plant cell do not have vacuole while animal cell do have
 - C. Plant cell have only cell membrane while animal cell have both cell wall
 - D. Plant cell have more plastids while animal cell have few plastids
56. Group of cells performing similar function is;
- A. Blood
 - B. Epithelial tissue
 - C. Tissue
 - D. Organ

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- A. Community
- B. Food web
- C. Biosphere
- D. Habitat

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Q.82 What amount of NaOH is required to prepare 500 cm³ of 0.1M solution?

- A. 1g
- B. 2g
- C. 4g
- D. 10g

Q.83 The substance used in the salt bridge of Galvanic cell is:

- A. K₂SO₄
- B. KCl
- C. K₂Cr₂O₇
- D. NaCl

Q.84 The oxygen atom in water is hybridized

- A. Sp³
- B. Sp²
- C. Sp
- D. dSp²

Q.85 Starch is a polymer of

- A. α-D-glucose
- B. β-D-glucose
- C. γ-D-glucose
- D. α-L-glucose

Q.86 The increase in concentration of oxidizing agents in smog like H₂O₂, HNO₂, PAN and ozone in the air is called:

- A. Carbonated smog
- B. Nitrated smog
- C. Sulphonated smog
- D. Photochemical smog

Q.87 An alcohol is converted to an aldehyde with same number of carbon atoms as that of alcohol in the presence of K₂Cr₂O₇/H₂SO₄, the alcohol is:

- A. CH₃Cl(CH₂)₂OH
- B. (CH₃)₂COH
- C. CH₃CH₂OH
- D. (CH₃)₂ClOH

Q.88 1-chloropropane and 2-chloropropane are isomers of each other, the type of isomerism in these two is called:

- A. Cis-trans isomerism
- B. Position isomerism
- C. Chain isomerism
- D. Functional group isomerism

Q.89 The paramagnetic character of a substance is due to:

97. A ball is thrown vertically upward. Its velocity at the highest point is:

- A. -10ms^{-1}
- B. Zero
- C. 10ms^{-2}
- D. None of these

98. Center of gravity is point at which :

- A. Whole weight acts
- B. Whole energy concentrated
- C. Changes continuously
- D. All of these

99. Which one is the scalar quantity

- A. Velocity
- B. Pressure
- C. Acceleration
- D. Force

100. A ball is dropped from a tower with zero velocity, reaches ground in 4s. the height of the tower is about

- A. 80m
- B. 20m
- C. 160m
- D. 40m

$$\frac{F}{A}$$

60. Inductor stores energy in a
a) Coil
b) Electric field
c) Magnetic field

- Biology**
61. Biological molecules (proteins) which catalyse a biochemical reaction and remain unchanged after completion of reaction are called;
a) Cofactor
b) Coenzyme
c) Activator
d) Enzyme
62. In which of the following location enzymes controlling cellular respiration are present?
a) Nucleus
b) Chloroplast
c) Mitochondria
d) Ribosome
63. An activated enzyme consisting of polypeptide chain and a cofactor is called;
a) Holoenzyme
b) Activated enzyme
c) Both a and b
d) Apoenzyme
64. Which one forms the raw material for coenzymes?
a) Vitamins
b) Carbohydrates
c) Proteins
d) Metals
65. Horn-warts are included in sub-class;
a) Bryopsida
b) Hepaticopsida
c) Psilopsida
d) Anthoceropsida

- Choose the word most similar in meaning to the capitalized one:

Q.51 LOCAL

- A. Distant
- B. Global
- C. Nearby
- D. Regional

Q.52 OFFENSIVE

- A. Upsetting
- B. Cruel
- C. Aware
- D. Normal

Q.53 GRATEFUL

- A. Supportive
- B. Thankful
- C. Healthy
- D. Kind

Q.54 PERIL

- A. Doom
- B. Happiness
- C. Action
- D. Danger

Q.55 LEAGUE

- A. Apartment
- B. Alliance
- C. Individual
- D. House

- Choose the lettered word or phrase that is most nearly opposite in meaning to the word in capital letters:

Q.56 TYPICAL

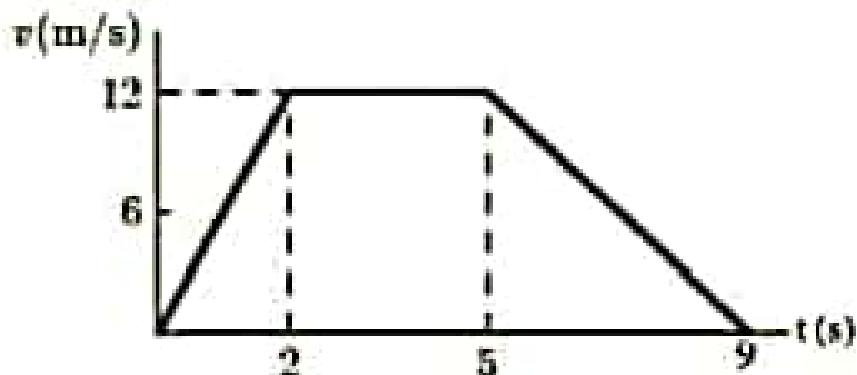
- A. Hazardous
- B. Average
- C. Abnormal
- D. Painful

Q.57 HECTIC

- A. Careful
- B. Calm
- C. Alone
- D. Specialized

31. A base soluble in water is called;
- a) Acidic
 - b) Basic
 - c) Alkali
 - d) Moisture
32. Chemical formula of washing soda?
- a) $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$
 - b) $\text{NaCO}_3 \cdot 5\text{H}_2\text{O}$
 - c) $\text{Na}_2\text{CO}_3 \cdot 20\text{H}_2\text{O}$
 - d) $\text{Na}_2\text{CO}_3 \cdot 15\text{H}_2\text{O}$
33. Efficiency of chemical reaction can be checked by calculating
- a) amount of limiting reactant
 - b) amount of the reactant in excess
 - c) amount of the product formed
 - d) amount of the reactant unused
34. Naphthalene is found in which physical state;
- a) Solid
 - b) Liquid
 - c) Gas
 - d) Plasma
35. Large number of isotopes are known for the elements whose masses are multiple of
- a) Eight
 - b) Six
 - c) Four
 - d) Two
36. Which one is a free radicle?
- a) H_2O
 - b) OCl_2
 - c) Br_2O_2
 - d) N_2O

- Q.96** The graph represents the straight line motion of a car. How far does the car travel between $t = 2\text{ s}$ and $t = 5\text{ s}$?



- A. 4 m
- B. 12 m
- C. 24 m
- D. 36 m

- Q.97** The inertia of a body tends to cause the body to:

- A. Speed up
- B. Slow down
- C. Resist any change in its motion
- D. Fall toward Earth

- Q.98** A 6-kg object is moving north. A net force of 12 N north on it results in the object having an acceleration of:

- A. 2 m/s^2 , North
- B. 2 m/s^2 , South
- C. 6 m/s^2 , North
- D. 6 m/s^2 , South

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<https://whatsapp.com/channel/0029VaV72IEC1FuDt56bS53Y>

Short link

<https://shorturl.at/CYKMc>

- Q.99** A block slides down a frictionless plane that makes an angle of 30° with the horizontal. The acceleration of the block is:

- A. 980 cm/s^2
- B. 566 cm/s^2
- C. 490 cm/s^2
- D. Zero

- Q.100** An object moves in a circle. If the mass is tripled, the speed halved, and the radius unchanged, then the magnitude of the centripetal force must be multiplied by a factor of:

- A. 3/2
- B. 3/4
- C. 9/4
- D. 6

74. Which of the following is not a connective tissue
A. bone
B. cartilage
C. blood
D. nerve
75. We need food for;
A. Support
B. Energy
C. Protection
D. Resistance
76. The tough clear covering over iris and pupil that helps to protect the eye is;
A. Lens
B. Cones
C. Cornea
D. Blind spot
77. Which of the following disease combination is caused by virus
A. Influenza, Dengue, AIDS
B. Influenza, Kala azar, Hemophilia
C. Sleeping sickness, Kala azar, Dengue
D. Influenza, Kala azar, Dengue
78. Antibiotics generally
A. Are toxic to bacteria
B. Directly kills the bacteria
C. Blocks biochemical pathways of bacteria
D. Suffocates the bacteria
79. Which of the diseases is not spread by casual physical contact
A. Syphilis
B. AIDS
C. Both A and B
D. Neither A nor B

82. Relative atomic mass is the mass of an atom of an element as compared to the mass of

- A. Oxygen
- B. Hydrogen
- C. Nitrogen
- D. Carbon

83. Isotopes are the sister atoms of the same element with similar chemical properties and different :

- A. Atomic number
- B. Atomic mass
- C. Atomic volume
- D. Atomic structure

84. Glucose and Fructose are

- A. Metamers
- B. Chain isomers
- C. Functional isomers
- D. Position isomers

85. Percentage of oxygen in H₂O is

- A. 80%
- B. 88.8%
- C. 8.8%
- D. 9.8%

86. More abundant isotope of an element is one with

- A. Even atomic no.
- B. Odd atomic no.
- C. Even mass no.
- D. Odd mass no.



37. Which allow the muscles to pull on bones

- A. Tendons
- B. Cartilage
- C. Ligaments
- D. Veins

38. Visceral muscle is also called

- A. Cardiac muscle
- B. Skeletal muscle
- C. Smooth muscle
- D. None

39. How many chambers in Amphibians heart

- A. Three
- B. Four
- C. Two
- D. Six

40. Nutrient absorption takes place during digestion occurs

- A. Large Intestine
- B. Small Intestine
- C. Stomach
- D. Windpipe

41. Structure composed of two or more tissues that work together to perform a particular function is called

- A. Tissue system
- B. Muscle
- C. Cell
- D. Organ

67. Different populations of plants and animals living together in the same habitat make up

- A. Community
- B. Food web
- C. Biosphere
- D. Habitat

68. The abnormal development resulting in small skull of an individual is the condition known as :

- A. Megacephaly
- B. Macrocephaly
- C. Microcephaly
- D. Mesocephaly

69. Acid rain is

- A. Oxides of Nitrogen and Sulphur dissolved in atmosphere during rain
- B. Rain of acid and no water
- C. Creating a fountain of acid
- D. None of the above

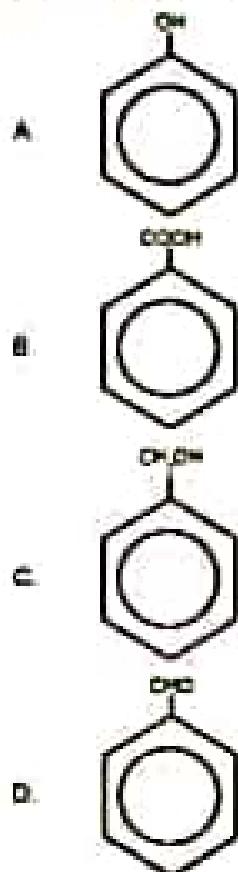
70. The study of relationship of organisms to their environment is known as;

- A. Biology
- B. Mycology
- C. Zoology
- D. Ecology

71. Biodegradable is composed of

- A. Nitrogen
- B. Plants, Animals and their wastes
- C. Mineral
- D. Salts

- A. Ethyl alcohol
B. Butyl alcohol
C. Primary alcohol
D. Secondary alcohol
- Q.79** The maximum number of electrons in a shell with the principal quantum number equal to 4 is:
A. 2
B. 10
C. 16
D. 32
- Q.80** Which of the following is used in manufacturing of Lamphes and Candles?
A. Esters
B. Phenols
C. Aldehydes
D. Ketones
- Q.81** Which one of the following formulae represents the organic compound formed when methylbenzene is heated under reflux with alkaline potassium manganate (VII) solution and the mixture then acidified?



D. FSH

- Q.21** The most concentrated external environment is called as:
A. Hypotonic
B. Hypertonic
C. Isotonic
D. Plasmatic
- Q.22** Joints that are held together by short fibers embedded in connective tissue.
A. Fibrous joint
B. Cartilaginous joint
C. Synovial joint
D. Hinge joint
- Q.23** Tetanus is caused by:
A. Protozoa
B. Fungi
C. Virus
D. Bacteria
- Q.24** The hormone which inhibits root growth is:
A. Auxin
B. Gibberellins
C. Cytokines
D. Abscisic acid
- Q.25** CNS is composed of:
A. Sensory neurons
B. Associative neurons
C. Motor neurons
D. Dendrites
- Q.26** Which one produced in excess than lead to abnormal development called acromegaly?
A. TSH
B. ACTH
C. STH
D. MSH
- Q.27** Corpus luteum secretes hormones called:
A. FSH
B. LH
C. Estrogen
D. Progesterone
- Q.28** Which is not a stimulus to release oxytocin?
A. Distension of cervix

85. Organs of excretion in annelids are

- a) Green gland
- b) Kidneys
- c) Malpighian
- d) Nephridia

86. The main source of energy for human brain

- a) Fats
- b) Glucose
- c) Vitamins
- d) Proteins

87. Which of the following are the bacterial diseases?

- a) Cholera and tuberculosis
- b) AIDS
- c) Mycosis
- d) Athlete's foot

88. What is the largest organ inside human body?

- a) Liver
- b) Lung
- c) Kidney
- d) Heart

A

89. Which of the cells has no nucleus?

- a) Eukaryotic
- b) Lymphocytes
- c) Red blood cells
- d) Monocytes

90. Function of xylem and phloem

- a) Protection
- b) Conduct water and food
- c) Transport gases
- d) To support plant

87. To achieve a good separation the two lipids are gently shaken to increase their area of
- mobility
 - separation
 - contact
 - solvability
88. Chromatographs in which stationary phase is solid is called
- partition chromatography
 - paper chromatography
 - high pressure
 - adsorption chromatography
89. Precipitate crystallization of solution of filter paper or in funnel can be avoided
- filtering hot saturated solution using hot funnel
 - filling warm solution
 - quick filtration
 - filtering cold solution
90. Safe and reliable method of drying crystal is through
- pressing it between folds of filter paper
 - drying it in oven
 - evaporation of solution
 - vacuum desiccator
- PHYSICS SECTION**
91. The bending of the light ray is called
- incident
 - Transparent
 - Refraction
 - None of above
92. The dimensional formula of Torque is :
- $[ML^2T]$
 - $[MLT]$
 - $[ML^2T^2]$
 - $[ML^3T]$
93. Solid state detector is basically :
- NPN Transistor
 - PNP Transistor
 - PN Junction
 - LED
94. The circuit which changes input signal at output with phase difference 180° is called
- Amplifier
 - Inverter
 - Non-inverter
 - Switch
95. An inductor store energy in its :
- Coil
 - Electric field
 - Magnetic field
 - Both B and C
96. Aluminum is a/an
- Photoconductor
 - Insulator
 - Excellent conductor
 - Bad conductor

MEC Signature

Name: Saleem Ullah

92-2974333-8



47. Primary wall of plant's cell is called _____

- A. Cutin
- B. Cellulose
- C. Lignin
- D. Waxes

48. The outer most boundary of the plant cell is called _____

- A. Nucleolus
- B. Cellulose
- C. Cell membrane
- D. Cell Wall

49. Nitrogen constitutes _____ % of our atmosphere

- A. 28
- B. 58
- C. 68
- D. 78

50. Crops grown in rainy season are called

- A. Kharif crops
- B. Rabi crops
- C. Rain crop
- D. All of the above

51. Photosynthesis in plants occurs only in _____

- A. Afternoon
- B. Day and Night
- C. Day Light
- D. None of these

52. How many Chromosomes in Humans

- A. 23
- B. 48
- C. 46
- D. 12

53. Plants use photosynthesis as a means of obtaining energy from:

- A. Water
- B. Sunlight
- C. Air
- D. Darkness

54. The protection of internal environment from harms and fluctuation of external environment is called _____

- A. Ecology
- B. Homeostasis
- C. Mutation
- D. Molecular biology

55. Thyroid gland produces _____

- A. T₃, T₄ and Calcium
- B. Calcitonin
- C. Tri-iodothyronine
- D. Tetra-iodothyronine

56. The hindbrain consists of _____

- A. Cerebrum
- B. Thalamus
- C. Hypothalamus
- D. Cerebellum



Ques One QUESTION

- A. soft
- B. leaves
- C. leaves
- D. soft leaves

7. The grass is wet because it _____ raining all day long.

- A. been
- B. has been
- C. was
- D. had

8. If I _____ a million rupees, I would help the poor.

- A. has
- B. have
- C. had
- D. should has

Pick the opposite of the following words:

9. Extraordinary means

- A. Amazing
- B. Remarkable
- C. Ordinary
- D. Wonderful

10. Compensate

- A. Repay
- B. Reimburse
- C. Pay back
- D. Lose

- C. ravenous
D. ostentatious
- Q.43** Steven is always _____ about showing up for work because he feels that tardiness is a sign of irresponsibility.
A. legible
B. literal
C. intolerable
D. punctual
- Q.44** It usually _____ here in June:
A. Rains
B. Rained
C. Will rain
D. Rain
- Q.45** I would like to have this suit _____.
A. Clean
B. Cleaning
C. Cleaned
D. To clean
- Q.46** Let us go to the bookshop as soon school _____.
A. Will be over
B. Was over
C. Be over
D. Is over
- * Identify the word or phrase that needs to be changed for the sentence to be correct:
- Q.47** I go by the post office every morning on my way to work.
A. B C D
- Q.48** She has been studying since 7 hours. No wonder why her teachers praise her hard work all the time.
A B C D
- Q.49** I was surprised to hear that it was the seven-hour trip up green mountains which they completed so fast.
A B
C D
- Q.50** The sentiments in the common people must be kept in mind when the Government decides to pass the Bill.
A B C D

- B. Decrease in progesterone level
- C. High level of Ca^{++} ion
- D. Neural stimulus during parturition

Q.29 Cleavage results in the formation of a round closely packed mass of blastomeres called:

- A. Blastula
- B. Morula
- C. Gastrula
- D. Neurula

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<https://whatsapp.com/channel/0029VaV72IEC1FuDt56bS53Y>
Short link
<https://shorturl.at/CYKMc>

Q.30 Each Okazaki fragment is synthesized by:

- A. RNA Polymerase
- B. DNA Polymerase I
- C. DNA Polymerase II
- D. DNA Polymerase III

Q.31 A gene start with initiation codon which encodes the amino acid methionine:

- A. UAA
- B. UAG
- C. AUG
- D. UGG

Q.32 Carboxyhaemoglobin (18-20%) is formed when CO combines with:

- A. Amine group of haemoglobin
- B. Haeme portion of haemoglobin
- C. Iron part of haemoglobin
- D. Plasma proteins

Q.33 Individual with Klinefelter's syndrome have sex chromosome as following:

- A. XY
- B. XXX
- C. XXY
- D. XYY

Q.34 What is the risk of colour blind family when father is colour blind and mother is normal?

- A. 0%
- B. 25%
- C. 50%
- D. 100%

Q.35 Which one is not biotechnology product?

- A. Hepatitis B
- B. Human growth hormone
- C. Tissue plasminogen activator
- D. Haemophilia factor I

* Questions 58-63 are based on the following passage:

But I did not want to shoot the elephant. I watched him beating his bunch of grass against his knees, with the *proverbial* *grandmotherly air* that elephants have. It seemed to me that it would be murder to shoot him. I had never shot an elephant and never wanted to. (Somehow it always seems worse to kill large animals.) Besides, there was the beast's owner to be considered. But I had got to act quickly. I turned to some experienced-looking Burmese who had been there when we arrived, and asked them how the elephant had been behaving. They all said the same thing: he took no notice of you if you left him alone, but he might charge if you went too close to him.

- Q.58** The phrase "Proverbial grandmotherly air" signifies:
A. Being totally unconcerned
B. Pretending to be very busy
C. A very superior attitude
D. Calm, dignified and affectionate disposition
- Q.59** From the passage it appears that the author was:
A. An inexperienced hunter
B. Kind and considerate
C. Possessed with fear
D. A worried man
- Q.60** The author did not want to shoot the elephant because he:
A. Was afraid of it
B. Did not have the experience of shooting big animals
C. Did not wish to kill animal which was not doing anybody any harm
D. Did not find the elephant to be ferocious

CHEMISTRY

- Q.61** Calculate the volume of O₂ at STP for the complete combustion of two moles of carbon disulphide which produce CO₂ and SO₂:
A. 130 dm³
B. 134.4 dm³
C. 44.8 dm³
D. 22.4 dm³
- Q.62** Which of the following bonds have maximum bond energy?
A. C—C
B. C=C
C. C≡C
D. N≡N
- Q.63** Molecular mass of water is:
A. 15 amu

97. Which one is first and longest phase of mitosis;

- a) Prophase
- b) Metaphase
- c) Anaphase
- d) Telophase

98. Inner lining of the mouth and esophagus are covered with;

- a) Ciliated columnar epithelium
- b) Cuboidal epithelium
- c) Squamous epithelium
- d) Stratified squamous epithelium

99. In vascular plants, Phloem contains

- a) Sieve tube
- b) Tracheid
- c) Vessel
- d) All of above

100. What is the difference between the plant cell and animal cell?

- a) Both have a cell wall
- b) Both have fixed shape
- c) Animal cells are round and irregular in shape
- d) Plant cell has many large central vacuole

66. Which of the following of bryophytes are the simplest one?
a) Mosses
b) Spores
c) Anthoceros
d) Polytrichum
67. Germinating pollen grain is a rich source of
a) cytokinin
b) gibberellin
c) auxin
d) rennin
68. Placenta passes out through vagina
a) 10-20 minutes after birth
b) 10-15 minutes after birth
c) 10-30 minutes after birth
d) 10-45 minutes after birth
69. Identical gametes are also known as
a) heterogametes
b) isogametes
c) anisogamete
d) hypo gametes
70. End or complete stop of menstrual cycle is called
a) menuend
b) In fertilization
c) menopause
d) ovulation
71. Clock in plant for measuring duration of darkness is provided by
a) rate of conversion of p660-p730
b) rate of conversion of p700 to p730
c) rate of p730 to p660 conversion
d) rate of conversion of p630 to p700
72. Certain very precise environmental cues are required for
a) seed dormancy
b) pollination
c) seed germination
d) seed formation

67 Different populations of plants and animals living together in the same habitat make up

- A. Community
- B. Food web
- C. Ecosystem
- D. Habitat

68 The abnormal development resulting in small skull of an individual is the condition known as:

- A. Megacephaly
- B. Macrocephaly
- C. Microcephaly
- D. Macrocephaly

69 Acid rain is

- A. Oxides of Nitrogen and Sulphur dissolved in atmosphere during rain
- B. Rain of acid and no water
- C. Creating a fountain of acid
- D. None of the above

70 The study of relationship of organisms to their environment is known as

- A. Hydrology
- B. Meteorology
- C. Zoology
- D. Ecology

71 Biodegradable is composed of

- A. Nitrogen
- B. Plants, Animals and their wastes
- C. Mineral
- D. Salts

72 When pollen is transferred from the stamens of one flower to the stigma of another or another plant of the same species is called

- A. Cross pollination
- B. Hybrid
- C. Cross Pollination
- D. Self pollination

73 Which are pollution indicator plants

- A. Mustard
- B. Lichen
- C. Rose
- D. Marigold

74 Which are herbivores animals

- A. Cow
- B. Fox
- C. Cat
- D. Wolf

75 In human beings Respiration takes place in the respiratory organs called

- A. Arteries
- B. Lungs
- C. Veins
- D. Gills

76 Plasma membrane is

- A. Semi permeable
- B. Permeable
- C. Selectively permeable
- D. Non permeable

37. Filter media are used for filtration depending on
- Nature of filter paper
 - Nature of reactants
 - Nature of precipitate
 - Nature of reaction
38. Which one is the safest and reliable method of drying crystal?
- Putting in the filter paper
 - Vacuum desiccator
 - Evaporation of solution
 - Putting in oven
39. The acid that is present in vinegar is
- Acetic acid
 - Oxalic acid
 - Nitric acid
 - Sulfuric acid
40. Sodium carbonate is;
- Alkali
 - Acid
 - Neutral
 - Base

Physics

41. Electric field at a point due to a point charge is 27N/C and electric potential at that point is 14J/C . Calculate the distance of the point from the charge and magnitude of charge.
- 378m
 - 9m
 - 1.9m
 - 0.5m
42. The transistor has collector current of 12mA and a base current of $45\mu\text{A}$. What is the current gain of transistor?
- 266.6
 - 250
 - 0.01
 - 4×10^3

79. Which of the following generates more energy in aerobic respiration;
- a) Protein
 - b) Sucrose
 - c) Glucose
 - d) Triglyceride
80. In higher plants inorganic compounds are obtained from the;
- a) Soil
 - b) Environment
 - c) Water
 - d) Species
81. RNA has the nitrogenous base uracil instead of;
- a) Adenine
 - b) Guanine
 - c) Cytosine
 - d) Thymine
82. Lysosomes are bounded by a;
- a) Thin membrane
 - b) Double membrane
 - c) Single membrane
 - d) None of above
83. The reddish color of the algae is due to
- a) Chlorophyll
 - b) Phycoerythrin
 - c) Saprophytes
 - d) Flagella
84. Tracheophytes have cells called
- a) Phylum
 - b) Psilopsida
 - c) Tracheids
 - d) Lycopsida

92. The dimensional formula of Torque is :

- A. $[ML^2T^2]$
- B. $[MLT^2]$
- C. $[ML^4T^2]$
- D. $[ML^2T^2]$

93. Solid state detector is basically :

- A. NPN Transistor
- B. PNP Transistor
- C. PN Junction
- D. LED

94. The circuit which changes input signal at output with phase difference 180° is called :

- A. Amplifier
- B. Inverter
- C. Non-inverter
- D. Switch

95. An inductor store energy in its :

- A. Coil
- B. Electric field
- C. Magnetic field
- D. Both B and C

96. Aluminum is a/an

- A. Photoconductor
- B. Insulator
- C. Excellent conductor
- D. Bad conductor

- Which of the following has discontinuous solubility curve?
- a) NaCl
 - b) KCl
 - c) NaNO₃
 - d) CaCl₂. 6H₂O

26. Sucrose is a disaccharide consisting of
- a) one glucose molecule
 - b) one fructose molecule
 - c) Both a & c
 - d) None of the above
27. Photosynthesis is the process used by plants to harness energy from sunlight and turn it into
- a) Chemical energy
 - b) Solar Energy
 - c) Potential Energy
 - d) Kinetic Energy
28. Aqueous solution of glucose boils at 100.52°C the solution contains;
- a) 180 gm glucose in 1 litre water
 - b) 90 gm glucose in 1 litre water
 - c) 18 gm glucose in 1 litre water
 - d) 3.6 gm glucose in 1 litre water
29. Molar mass of H₂SO₄ is;
- a) 100
 - b) 98
 - c) 60
 - d) 99
30. Honey bee sting is _____ in nature.
- a) Basic
 - b) Acidic
 - c) Neutral
 - d) Both A and B

25. The earth _____ around the sun
- A. go
 - B. goes
 - C. going
 - D. gone

26. I shall look _____ the matter
- A. into
 - B. in
 - C. about
 - D. after

27. The number of books in the library _____ risen to twenty thousand
- A. has
 - B. is
 - C. are
 - D. have

Select the word which is most nearly similar in meaning (Synonyms)

28. Abundance
- A. Plenty
 - B. Rare
 - C. Exceptional
 - D. None of the above

29. Prudent
- A. Irrational
 - B. Hasty
 - C. Foolish
 - D. Wise

30. Demolish
- A. Destroy
 - B. Form
 - C. Build
 - D. Arrange

31. Profound
- A. Reflective
 - B. Light
 - C. Moderate
 - D. None of the above

32. Curtail
- A. Growth
 - B. Increase
 - C. Cut down
 - D. Smooth

33. Vigilant
- A. Attentive
 - B. Bore
 - C. Careless
 - D. Fixed

34. Alluring
- A. Audacity
 - B. Disturbing
 - C. Diligent
 - D. Attractive

Select the word which is most nearly opposite in meaning (antonyms)

35. Disburse
- A. Collect
 - B. Gather
 - C. Payout
 - D. Discard

19. Simplest formula that gives us information about the simple ratio of atoms in a compound is called
- A. structural formula
 - B. molecular formula
 - C. empirical formula
 - D. molar ratio
20. Photosynthesis is
- A. endothermic reaction
 - B. exothermic reaction
 - C. enthalpy change
 - D. fusion reaction
21. The smoke went _____ in the chimney
- A. In
 - B. by
 - C. On
 - D. up
22. Water is made up of two _____
- A. aspects
 - B. sections
 - C. elements
 - D. none of the above
23. He has _____ his mind to join the army
- A. made-up
 - B. make-up
 - C. made with
 - D. made by
24. The movie was not very good. I _____ enjoy it much
- A. do not
 - B. did not
 - C. does not
 - D. am not

43. One peta is equal to;
- 10^{18}
 - 10^{19}
 - 10^{12}
 - 10^{11}
44. The scalar product of two vectors is minimum when they are;
- Parallel
 - Perpendicular
 - Null
 - Anti-parallel
45. A length of ruler is 45 centimeter, at 15 cm a weight of 10N hanged, the moment of force applied at 35cm, what will be the moment of force?
- 2 N m
 - 1 N m
 - 0.5 N m
 - 1.5 N m
46. A load of 7 kg is lifted upward at angle of 90° from floor, for a distance of 12 meters at a constant speed. What is the gravitational potential energy gained by the load? (The acceleration due to gravity is 10ms^{-2}).
- 0.84 J
 - 840 J
 - 84 J
 - 420 J
47. Sound Wave transfers
- Matter
 - Force
 - Molecules
 - Energy
48. Which one is NOT the transverse wave?
- Water waves
 - Micro waves
 - Rope waves
 - Waves on springs

Select the opposite (Antonym)

1. Bilateral
 - a) Joint
 - b) Reciprocal
 - c) Mutual
 - d) Autonomous
2. Detention
 - a) Custody
 - b) Apprehension
 - c) Liberation
 - d) Confinement
3. Amateur
 - a) Sloppy
 - b) Apprentice
 - c) Novice
 - d) Professional
4. Confront
 - a) Provoke
 - b) Evade
 - c) Defy
 - d) Antagonize
5. Siege
 - a) Soothe
 - b) Blockade
 - c) Beset
 - d) Obstruction
6. Humiliation
 - a) Embarrassment
 - b) Indignity
 - c) Disgrace
 - d) Esteem

7. Reminiscent
 - a) Redolent
 - b) Suggestive
 - c) Obvious
 - d) Similar

Select the Similar (Synonyms)

8. Dichotomy
 - a) Contrast
 - b) Willingness
 - c) Inclination
 - d) Disposition
9. Pragmatic
 - a) Idealistic
 - b) Realistic
 - c) Irrational
 - d) Illogical
10. Sanctity
 - a) Holiness
 - b) Malice
 - c) Greed
 - d) Hatred
11. Heinous
 - a) Odious
 - b) Horrible
 - c) Glorious
 - d) Flagrant
12. Repulsive
 - a) Attractive
 - b) Ugly
 - c) Mild
 - d) Willingness

BIOLOGY SECTION

20. Which animal group has the highest percentage of species?
A. Insects
B. Mammals
C. Amphibians
D. Reptiles
21. Which Group of Plants shows more species diversity?
A. Algae
B. Fungi
C. Bryophytes
D. None
22. Fossils are found in which rocks
A. Sedimentary
B. Igneous
C. Metamorphic
D. None
23. Erosion is
A. Polluted Area
B. Bottom of Sea
C. Zone of developing community
D. None
24. Which forest plants controls the light conditions at the ground
A. Lianas
B. Shrub
C. Tall Trees
D. Roots

25. Non-living death in single celled organisms because
A. They reproduce by binary fission
B. They are microscropic
C. Parental body is dissolved among the offspring
D. None
26. The organism which causes disease in plants are called
A. Worms
B. Pathogens
C. Insects
D. Larvae
27. In which product there is no Carbohydrates
A. Vegetables
B. Fruits
C. Meat
D. Grains
28. Enzyme is a substance produced by
A. Living Organism
B. Dead Organism
C. Molecules
D. Cells
29. Which type of biomolecule that does not form polymers
A. Protein
B. Carbohydrates
C. Lipids
D. Nucleic Acids
30. Secretion of hormones depends upon
A. Circulatory
B. Respiration
C. Digestive
D. Endocrine

62. Phloem contains
- Sieve tube
 - Tracheid
 - vessel
 - All of these
63. Which type of cell division occurs during healing of wound?
- Meiosis
 - Mitosis
 - Metaphase
 - Anaphase
64. Inner lining of the mouth and esophagus are covered with;
- Ciliated columnar epithelium
 - Cuboidal epithelium
 - Stratified squamous epithelium
 - Squamous epithelium
65. First and longest phase of mitosis;
- Metaphase
 - Prophase
 - Anaphase
 - Telophase
66. Tendons connect
- Bone to bone
 - Muscle to bone
 - Muscle to muscle
 - None of the above
67. Optimum pH of pepsin is;
- 2
 - 3
 - 5
 - 4

13. Curtail
a) Amplify
b) Broaden
c) Restrain
d) Extend
14. There was _____ anger in his voice that I had to leave.
a) Much
b) So much
c) To much
d) So
15. There is no glory in war ____ — the blood it _____.
a) thinking, demanding
b) considering, sheds
c) worth, costs
d) comparing, spills
16. To _____ yourself from the _____ wear warm cloths.
a) protect, cold
b) prohibit, heat
c) save, heat
d) suffer, cold
17. Wars usually result from _____ among the parties involved and a failure to _____ them peacefully.
a) doubts, dispel
b) hostilities, debate
c) frustrations, understand
d) disagreements, resolve.
18. Four independent _____ testified to seeing him at the scene of the crime.
a) Witnesses
b) Person
c) Spectator
d) Viewers

36. Fatal
A. Lethal
B. Contractive
C. Mortal
D. Incurable
37. Generosity:
A. Stinginess
B. Kind
C. loveable
D. Bounty
38. Brutal
A. Cruel
B. Humane
C. Violent
D. Savage
39. Brisk
A. Active
B. Animated
C. Agile
D. Slow
40. Breach
A. Break
B. Rift
C. Crack
D. Agreement
41. Which of the following are the bacterial diseases?
A. ✓ Cholera and tuberculosis
B. AIDS
C. Mycosis
D. Athlete's foot
42. The impressions or the remains of living organisms preserved in rocks:
A. Tissues
B. Calcium
C. Statutes
D. ✓ Fossils
43. In structure of bacterium, capsule's function is:
A. Decompose
B. Stability
C. Protection
D. Locomotion
44. Cell was first discovered by:
A. Robert Book
B. Charles Hooke
C. Robert Hooke
D. Leeuwenhoek
45. Plasma membrane present in animal cell is actually:
A. Semi permeable
B. permeable
C. Selectively permeable
D. Non permeable
46. Which of the following is NOT a white blood cell
A. Granulocyte
B. Lymphocyte
C. Phagocyte
D. Monocyte

1. Which one of the following is a free radicle?

 - A. NO_2
 - B. OCl_2
 - C. Br_2O_2
 - D. H_2O
2. A base soluble in water is called _____

 - A. Acidic
 - B. Basic
 - C. Alkali
 - D. Moisture
3. Science of the chemical characterization is stand under the heading of

 - A. industrial chemistry
 - B. experimental chemistry
 - C. analytical chemistry
 - D. physical chemistry
4. Chemical formula of soda ash:

 - A. NaO
 - B. NaCO
 - C. Na_2CO_3
 - D. NaNH_3
5. Several types of filter media are used for filtration depending on

 - A. nature of reaction
 - B. nature of reactants
 - C. nature of precipitate
 - D. nature of filter paper
6. Filtration by a glass funnel and filter paper is very

 - A. time consuming
 - B. difficult
 - C. fast
 - D. accurate

77. Which of the diseases is not spread by casual physical contact?
- Syphilis
 - AIDS
 - Both A and B
 - Neither A nor B
78. Plants make their own food by the process known as _____.
- Photosynthesis
 - Respiration
 - Excretion
 - Nutrition
79. A carnivore is termed as a _____.
- Primary consumer
 - Secondary consumer
 - Both A and B
 - None of these
80. The food relationship among organisms is called _____.
- Link
 - Food producers
 - Food chain
 - None of these
- CHEMISTRY SECTION**
81. Which of the following sets contains only elements?
- Air, water, oxygen
 - Hydrogen, oxygen, brass
 - Air, water, fire, earth
 - Calcium, Sulphur, carbon
82. Relative atomic mass is the mass of an atom of an element as compared to the mass of _____.
- Oxygen
 - Hydrogen
 - Nitrogen
 - Carbon
83. Isotopes are the sister atoms of the same element with similar chemical properties and different _____.
- Atomic number
 - Atomic mass
 - Atomic volume
 - Atomic structure
84. Glucose and Fructose are _____.
- Metamers
 - Chain isomers
 - Functional isomers
 - Position isomers
85. Percentage of oxygen in H₂O is _____.
- 80%
 - 88.8%
 - 8.8%
 - 9.8%
86. More abundant isotope of an element is one with _____.
- Even atomic no.
 - Odd atomic no.
 - Even mass no.
 - Odd mass no.

7. Basic principles of crystallization is that solute should be soluble in a suitable solution at
- freezing temperature
 - room temperature
 - high temperature
 - low temperature
8. Premature crystallization of solution of filter paper or in funnel can be avoided
- filtering hot saturated solution using hot funnel
 - filtering warm solution
 - quick filtration
 - filtering cold solution
9. Acid present in milk
- Sulphuric acid
 - Organic acid
 - Lactic acid
 - Oxalic acid
10. Safe and reliable method of drying crystal in through :
- pressing it between folds of filter paper
 - drying it in oven
 - evaporation of solution
 - vacuum desiccator
11. Acid that is present in vinegar
- Lactic acid
 - Oxalic acid
 - Acetic acid
 - Sulphuric acid
12. More abundant isotope of an element is one with
- Even atomic no.
 - Odd atomic no.
 - Even mass no.
 - Odd mass no.

- A. Bond pairs of electrons
- B. Unpaired electrons in atoms or molecule
- C. Lone pairs of electrons
- D. Paired electrons in valence shells of electrons.

Q.90 The pH of solution is 5. To this solution sufficient acid was added and its pH decreases to 2. The increase in hydrogen ion concentration is:

- A. 10 times
- B. 100 times
- C. 1000 times
- D. 2.5 times

PHYSICS

Q.91 A nanosecond is:

- A. 10^9 s
- B. 10^{-9} s
- C. 10^{-10} s
- D. 10^{-11} s

Q.92 The dimensional formula of angular velocity is:

- A. $M^0 L^0 T^{-1}$
- B. MLT^{-2}
- C. $M^0 L^0 T^0$
- D. $ML^0 T^{-2}$

Q.93 A baseball is thrown vertically into the air. The acceleration of the ball at its highest point is:

- A. zero
- B. g, down
- C. g, up
- D. 2g, down

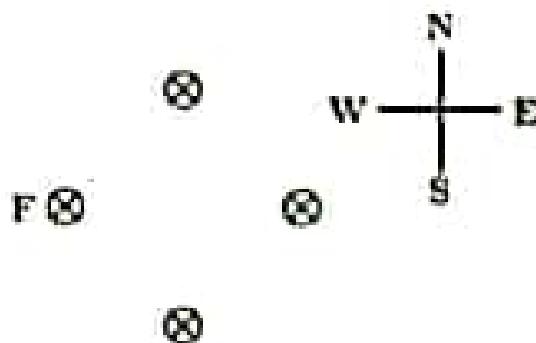
Q.94 The area under a velocity-time graph represents:

- A. Acceleration
- B. Speed
- C. Change in velocity
- D. Displacement

Q.95 An object is thrown straight up from ground level with a speed of 50 m/s. If $g = 10 \text{ m/s}^2$ its distance above ground level 6.0 s later is:

- A. 120 m
- B. 270 m
- C. 480 m
- D. 0.00 m

- Q.113** Four long straight wires carry equal currents into the page as shown. The magnetic force exerted on wire F is:



- A. North
- B. East
- C. South
- D. West

- Q.114** The relation " $n_1 \sin \theta_1 = n_2 \sin \theta_2$ ", which applies as a ray of light strikes an interface between two media, is known as:

- A. Gauss' law
- B. Snell's law
- C. Faraday's law
- D. Coul's law

- Q.115** Starting with a sample of pure ^{65}Cu , 7/8 of it decays into Zn in 15 minutes. The corresponding half-life is:

- A. 15 minutes
- B. 5 minutes
- C. 7 minutes
- D. 3.75 minutes

- Q.116** Which one of the following is NOT needed in a nuclear fission reactor?

- A. Moderator
- B. Coolant
- C. Control device
- D. Accelerator

- Q.117** In Compton scattering from stationary particles the maximum change in wavelength can be made smaller by using:

- A. Higher frequency radiation
- B. Lower frequency radiation
- C. More massive particles
- D. Less massive particles

- Q.101** A boy holds a 40-N weight at arm's length for 10 s. His arm is 1.5m above the ground. The work done by the force of the boy on the weight while he is holding it is:
- A. 0 J
 - B. 6.1 J
 - C. 40 J
 - D. 60 J
- Q.102** An elevator is rising at constant speed. Consider the following statements:
- I. The upward cable force is constant.
 - II. The kinetic energy of the elevator is constant.
 - III. The gravitational potential energy of the Earth-elevator system is constant.
 - IV. The acceleration of the elevator is zero.
 - V. The mechanical energy of the Earth-elevator system is constant.
- A. only II and V are true
 - B. only IV and V are true
 - C. only I, II, and III are true
 - D. only I, II, and IV are true
- Q.103** Two boulders, A and B, have equal kinetic energies. The mass of A is nine times that of B. The ratio of the momentum of A to that of B is:
- A. 1:9
 - B. 1:3
 - C. 1:1
 - D. 3:1
- Q.104** One revolution is the same as:
- A. 57 rad
 - B. $\pi/2 \text{ rad}$
 - C. $\pi \text{ rad}$
 - D. $2\pi \text{ rad}$
- Q.105** An object attached to one end of a spring makes 20 vibrations in 10 s. Its frequency is:
- A. 2 Hz
 - B. 10 s
 - C. 0.05 Hz
 - D. 2 s
- Q.106** A column of argon is open at one end and closed at the other. The shortest length of such a column that will resonate with a 200 Hz tuning fork is 42.5 cm. The speed of sound in argon must be:
- A. 85.0 m/s
 - B. 170 m/s
 - C. 340 m/s
 - D. 470 m/s

- Q.118** Light from some stars shows an apparent change in frequency because of:
- Interference
 - Diffraction
 - Reflection
 - Relative motion
- Q.119** In connection with X-ray emission the symbol L_J refers to:
- Beta particle radiation
 - An atomic state of angular momentum $h/2\pi$
 - The inductance associated with an orbiting electron
 - X-radiation associated with an electron going from $n = 4$ to $n = 2$
- Q.120** In a Young's double-slit experiment, the slit separation is doubled. To maintain the same fringe spacing on the screen, the screen-to-slit distance "D" must be changed to:
- $D/2$
 - $D\sqrt{2}$
 - $D/2$
 - $2D$

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- Q.107** Heat has the same units as:
- Temperature
 - Work
 - Energy/Time
 - Heat capacity
- Q.108** An ideal gas of N diatomic molecules has temperature T . If the number of molecules is doubled without changing the temperature, the internal energy increases by:
- 0
 - $\frac{1}{2} N k T$
 - $\frac{2}{3} N k T$
 - $\frac{8}{3} N k T$
- Q.109** Two identical charges, $2.0 \mu\text{C}$ apart, exert forces of magnitude 4.8N on each other. The value of either charge is:
- $1.8 \times 10^{-9}\text{ C}$
 - $2.1 \times 10^{-9}\text{ C}$
 - $4.2 \times 10^{-9}\text{ C}$
 - $1.9 \times 10^1\text{ C}$
- Q.110** The units of capacitance are equivalent to:
- C^2/J
 - VC
 - V/C
 - F/C
- Q.111** By using only two resistors, R_1 and R_2 , a student is able to obtain resistances of $3\ \Omega$, $4\ \Omega$, $12\ \Omega$, and $16\ \Omega$. The values of R_1 and R_2 (in ohms) are:
- 3, 4
 - 4, 12
 - 3, 16
 - 2, 12
- Q.112** A battery with an emf of 24V is connected to a $6\text{-}\Omega$ resistor. As a result, current of 3A exists in the resistor. The terminal potential difference of the battery is:
- 0 V
 - 6 V
 - 12 V
 - 18 V

HEC (PHASE-II) PRACTICE TEST BY MCAT MCQs

ANSWER KEY

HAT-UG-M (MCAT MCQs)							
BOOK COLOR GREEN							
TEST TIME 9:00AM (September 16, 2017)							
Q. No.	Answer	Q. No.	Answer	Q. No.	Answer	Q. No.	Answer
Q.1	B	Q.31	C	Q.61	B	Q.91	B
Q.2	C	Q.32	A	Q.62	D	Q.92	A
Q.3	B	Q.33	C	Q.63	D	Q.93	B
Q.4	C	Q.34	A	Q.64	C	Q.94	D
Q.5	C	Q.35	D	Q.65	B	Q.95	A
Q.6	C	Q.36	D	Q.66	C	Q.96	D
Q.7	B	Q.37	A	Q.67	A	Q.97	C
Q.8	B	Q.38	B	Q.68	A	Q.98	A
Q.9	B	Q.39	C	Q.69	D	Q.99	C
Q.10	B	Q.40	B	Q.70	B	Q.100	B
Q.11	B	Q.41	A	Q.71	B	Q.101	A
Q.12	D	Q.42	C	Q.72	A	Q.102	D
Q.13	D	Q.43	D	Q.73	B	Q.103	D
Q.14	B	Q.44	A	Q.74	A	Q.104	D
Q.15	B	Q.45	C	Q.75	D	Q.105	A
Q.16	B	Q.46	D	Q.76	C	Q.106	C
Q.17	B	Q.47	D	Q.77	A	Q.107	B
Q.18	B	Q.48	B	Q.78	B	Q.108	D
Q.19	B	Q.49	B	Q.79	D	Q.109	C
Q.20	B	Q.50	B	Q.80	B	Q.110	A
Q.21	B	Q.51	C	Q.81	B	Q.111	B
Q.22	A	Q.52	A	Q.82	B	Q.112	D
Q.23	D	Q.53	B	Q.83	B	Q.113	B
Q.24	D	Q.54	D	Q.84	A	Q.114	B
Q.25	B	Q.55	B	Q.85	A	Q.115	B
Q.26	C	Q.56	C	Q.86	D	Q.116	D
Q.27	D	Q.57	B	Q.87	C	Q.117	C
Q.28	C	Q.58	D	Q.88	B	Q.118	D
Q.29	B	Q.59	B	Q.89	B	Q.119	D
Q.30	D	Q.60	B	Q.90	C	Q.120	D

Official Result will be displayed on September 17, 2017 at 4:00PM

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