

FMDC 2012

ENGLISH

Q1. Ambition is one of those _____ which is never satisfied.

- A) Ideas
- B) fancies
- C) energies
- D) passions**

Q2. The opponents were outnumbered, but still the commander refused to give _____?

- A) Out
- B) way
- C) over
- D) in**

Q3. Spot the error:

the dean of this college is a good friend of **me**.

Q4. Spot the error:

there **have** been heavy rainfall yesterday!

Q5. Choose similar meanings

barbarian

- a) uncivilized**
- b) civilized

Q6. Choose opposite meaning

uncertain

- a) vague

- b) doubtful
- c) sure**
- d) clownish

Q7. Choose the opposite meaning:

quote

a) cite

b) analyze

Q8. He was very polite _____ me.

a) to

b) with

c) on

d) for

e) of

Read the passage to answer the question 9-10

Doctors are people who examine other people in their clinics. When patients visit them, the doctors follow a certain procedure. They take the pulse, thump the chest and listen to the heart beats through the stethoscope, and perhaps a miniature rubber tyre is put around the patient's arm and is blown up to check what is called blood-pressure

Q9. Who are the other people whom doctors examine?

a) Men

b) Women

c) Patients

d) Children

Q10. Patients visit doctors means

a) They address them

b) They visit their homes

- c) **They go to them as patients**
- d) They make courtesy calls on them

PHYSICS

Q1. Two masses of 7kg and 3kg respectively are hanging on a frictionless pulley...
Calculate the acceleration due to gravity...

- a) 1 ms^{-2}
- b) 2 ms^{-2}
- c) 3 ms^{-2}
- d) 4 ms^{-2}**
- e) 5 ms^{-2}

Q2. A body is moving upward with a velocity of 500 what will be the height?
Ans: **12.7km**

Q3. A ball is thrown vertically upward with a velocity of 98 m/s, how high does the ball rise? ($g = 9.8 \text{ m/s}^2$)

- a.360 meters
- b.380 meters
- c.490 meters**
- d.510 meters
- e.320 meters

Q4. which quantity can be described in terms of only two base quantities?
a. Current

b. Charge

c. force

d. temperature

Q5. at given t taken a body at rest which then moves with an acceleration, after 3sec its momentum is?

(Incomplete data)

Q6. Which pair includes a scalar quantity and a vector quantity?

a. Kinetic energy and momentum

b. Potential energy and work

c. Velocity and acceleration

d. Weight and force

Q7. a stone is whirled, the stone experience an inward force by string which is?

A. centrifugal force

B. proportional to square of speed

C. tangent

D. inverse of square of speed

Q8. One volt can be defined as?

A. 1J work done in moving unit positive charge from one point to another

B. ratio of energy dissipated at one and other point

C. ratio of power dissipated at one and other point

Q9. work done by a constant source of 1kW power that is 1000 J per sec in one hr is?

a. kwh

b. watt

c. watt hour

Q10. If in a parallel plate capacitor we insert a metal sheet of half the thickness as compared with the spacing between the plates of the capacitor, the capacitance becomes...?

A) C/4

- B) $C/2$
- C) $2C$**
- D) $4C$
- E) $0.5C$

Q11. the focal length ($f=10\text{cm}$). At what distance object should be placed to get an image twice size of object?

15cm

Q12. In diffraction experiment, something done by moving apparatus away from screen such that plane wavefronts are obtained! This describes?

A. Michelson diffraction

B. Newton's diffraction

Q13. Which of the following electromagnetic phenomenon wave nature is not enough to explain?

A. Photoelectric effect

B. interference

C. Diffraction

D. polarization

Q14. a freely falling object is an example of?

A. Newton's first law

B. Newton's 2nd law

C. Archimedes principle

Q15. If resulting intensity is greater than individual intensities of two waves then it is?

A. Constructive interference

B. Destructive interference

C. Instinctive interference

D. none

Q16. for 0 to 10 degrees Celsius rise in temperature, volume of water will?

- A. increase
- B. decrease
- C. first decreases then increases**
- D. no effect

Q17. In an organ pipe if a person blows it fast then what change will occurs in sound waves?

- I. speed
- II. Amplitude
- III. Frequency
- IV. Intensity

- a. I n II
- B. I Only
- c III only**
- d I,II,III and IV

Q18. A gas has a volume of 500 ml at 760 torr. What will be the pressure if the volume is reduced to 300 ml...?

1266.67 torr

Q19. A student calculates the result of an experiment as 1.65, 1.72 and 1.89... But when he checks the answer, it comes out to be 2.35. What would it be called?

- A = No precision and no accuracy.
- B = No precision but accurate.
- C = No accuracy but precise.**
- D = Accurate and precise.

Q20. Heating a gas at constant volume will cause...

- A. Increase in temperature.
- B. Increase in temperature and internal energy.**
- C. Increase in internal energy.
- D. Decrease in internal energy and increase in temperature.

Q21. Light passes through two parallel slits and falls on a screen. The pattern produced is due to interference and:

- A. Reflection
- B. Refraction
- C. Polarization
- D. Diffraction**
- E. Absorption

Q22. A racing car accelerates uniformly through three gears, changes with the following average speed:

- 20 for 2.0 s
- 40 for 2.0 s
- 60 for 6.0 s

What is the overall average speed of the car?

- A. 12
- B. 13.3
- C. 40
- D. 48**
- E. 37

Q23. Radiation is the chief method of energy transfer:

- A. from the Sun to an Earth satellite**
- B. from a gas flame to water in a teakettle
- C. from a soldering iron to metals being soldered
- D. from water to an ice cube floating in it
- E. from a mammal to the surrounding air

BIOLOGY

Q1. The difference between the rough Endoplasmic reticulum and smooth endoplasmic reticulum is due to the presence of

- a. mesosomes
- b. Ribosomes**
- c. Golgi bodies
- d. mitochondria

Q2. Which of the following is correctly paired with its function?

- a. Mitochondria
- b. Golgi bodies = formation of polysaccharides
- c. Lysosomes is a single celled organelle for packing**
- d. Ribosome , work more efficiently in acidic medium
- e. none

Q3. which of the following hormones of endocrine system is not paired correctly?

- a. Anterior Pituitary Gland =LH
- b. Adrenal Cortex = Glucocorticoids
- c. Posterior Pituitary Gland = FSH**
- d. Adrenal medulla = epinephrine
- e. Parathyroid = paratharmone

Q4. Ascaris belongs to the phylum...?

- a. Annelida
- b. Arthropoda
- c. Nematodes**
- d. Echinodermata
- e. Platyhelminthes

Q5. The process of formation of RNA from DNA is called

- A. Translation
- b. Transcription**
- c. Mutation
- d. replication

Q6. Loss of water through hydathodes is called

- a. Guttation**
- b. Transpiration
- c. photosynthesis
- d. respiration

Q7. Which of the following is the part of Pectoral Girdle?

- A. Patella
- B. Pubis
- C. Femur
- D. Glenoid cavity**

Q8. Antibodies are not present in...?

- A. Blood
- B. Lymph**
- C. Plasma
- D. Saliva

Q9. Two or more populations of different species living and interacting in same area are called

- A. Group
- B. Community**
- C. habitat
- D. population

Q10. Apple trees, oaks and palm trees are...?

- A. Angiosperms**
- B. Gymnosperms
- C. Chordates
- D. Bryophytes

Q11. Cerebellum causes...?

- A. Muscle contraction**
- B. Blinking of eyes

- C. Dilation and constriction of pupil
- D. Knee jerking

Q12. if a man is color blind and marry with normal woman what will be correct?????

- a.100% of females will be carrier and 100% of males will be normal**
- b.50% normal males 100% affected females
- c.50 % males affected 50% female carriers
- d.100 % females normal 50 % males affected

Q13. Pepsin is a _____ and secreted by _____

- a. acid.....intestine
- b. Enzyme.....Stomach**
- c. Protein.....Jejunum
- d. secretion...pancreas

Q14. Which one of the following is the correct outline of the main events in photosynthesis?

- a. Oxygen reacts with a carbohydrate to produce water and carbon dioxide in the presence of light
- b. Light joins carbon dioxide to an acceptor compound which is then reduced by hydrogen obtained from water
- c. Light splits water and the resulting hydroxyl group combines with a compound which has incorporated carbon dioxide
- d. Light splits carbon dioxide and the resulting carbon then combines with oxygen and hydrogen obtained from water
- e. Carbon dioxide combines with an acceptor compound and this is reduced by hydrogen split from water by light**

Q15. Progesterone causes?

- A. Makes uterus ready for implantatiOn**
- B. Releases FSH

- C. produces follicle
- D. inhibits LH

Q16. which one is not a respiratory organ of arthropods?

- a. Gills
- b. Book lung
- c. Trachea
- d. antenna**

Q17. what is that response in which organism don't show any differences on repeated UN- harmful affects?

- a) imprinting
- b) habituation**
- c) instinct learning
- d) learning

Q18. which one is the correct for the theory of Darwin??

- I. struggle for existence
 - II. survival I
 - II. overproduction
 - IV. evolution
- a. I,II,III,IV
 - b. III,I,II,IV**
 - c. IV,III,II,I
 - d. II, I , III , IV

Q19. Which one is not an STD??

- a. Gonorrhea
- b. syphilis
- c. AIDS
- d. meningitis**
- e. herpes simplex

Q20. The common disease caused by lack of vitamin C is called:

- A. Diabetes Mellitus
- B. Typhoid
- C. Scurvy**
- D. Malaria
- E. None of the above

Q21. The cell transmits impulses from the

- A. effector organ to the spinal cord
- B. receptor cells to the effector organ
- C. receptor cells to the spinal cord
- D. spinal cord to the effector organ**
- E. spinal cord to the receptor cells

Q22. How many bones are present in the wrist?

- A. Four bones
- B. Six bones
- C. Eight bones**
- D. Ten bones
- E. Many bones

Q23. Molds and yeast are classified as

- A. Rhodophytes
- B. Bryophytes
- C. Fungi**
- D. Ciliates
- E. Flagellates

CHEMISTRY

Q1. The pH of 1 Molar KOH is...?

- A. 8
- B. 7
- C. 14**
- D. 1

Q2. The electronic configuration $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^7$ depicts an atom of the element:

- A. Br
- B. Co**
- C. Ga
- D. Mg
- E. Cd

Q3. Oxidation of secondary Alcohol gives...?

- A. Aldehyde
- B. Ketone**
- C. Ethene
- D. Mineral acid

Q4. If two atoms of different elements having different electro negativities combine in such a way, that they share electrons... then the bond between them is...?

- A. Polar covalent.**
- B. Non-polar covalent

- C. Hydrogen bond
- D. Ionic bond

Q5. Shiny, electrically non conducting, and brittle. These characteristics depict that the element under consideration is...?

A. Halogen

- B. Transition Metal
- C. Alkali Metal
- D. Alkaline earth metal

Q.6 which of the following is a most highly reactive metal?

A = Na

B = Cl

C = Mg

D = Fe

Q7. There is a chemical under consideration. We don't know if its is HCl or H₂SO₄. Which of the following compounds will react with the chemical under consideration to produce a precipitate and hence confirming the fact that the chemical is H₂SO₄...?

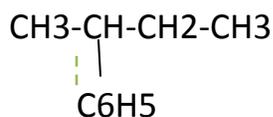
A. LiNO₃

B. Ba(NO₃)₂

C. AgNO₃

D. NaCl

Q8. Give the IUPAC name of



- a. neobutane
- b. hexobutane
- c. 2-Phenylbutane**
- d. 2-hexobutane

Q9. how many electrons are in Cl-37 with charge minus 1?

18

Q10. A gaseous organic compound, X, was burnt in an excess of oxygen. A 0.112 dm sample of X, measured at s.t.p., produced 0.88 g of carbon dioxide.

How many carbon atoms are there in one molecule of X?

A. 1

B. 2

C. 3

D. 4

E. 8

Q11. In neutralization:

A. the base is neutralized

B. the acid is neutralized

C. a salt is formed

D. all of the above

Q12. -rays (Alpha) are:

A. fast moving electrons

B. protons

C. neutron

D. positively charged helium nuclei

Q13. Which orbital has lowest energy?

A. 3d

B. 3p

C. 4s

D. 4f

E. 5f