DE-3318
First Year B. Sc. (Home Science) (Sem. I) Examination
March / April – 2016
Applied Science

Time : 2 Hours] [Total Marks : 50

Instructions :

(1) Fill up strictly the details of signs on your answer book.

Name of the Examination:
FIRST YEAR B. SC. (HOME SCIENCE) (SEM. I)

Name of the Subject:
APPLIED SCIENCE

Subject Code No. 33 1 8 Section No. (1, 2,……..) Nil

(2) There are 50 questions each question carries one (1) mark and all are compulsory.

(3) Read the question carefully before selecting the correct option.

O.M.R. Sheet अंकन अनेक अंकन-नी सूचनाओ अण्य अण्य शेष छ. ओमेरी शीट-नी पाल्छ छ.

Important instructions to fill up O.M.R. Sheet is given back side of provided O.M.R. Sheet.
1 The study of fungi is called ________
   (A) Plant pathology
   (B) Mycology
   (C) Fungistics
   (D) Phycology

2 Arrangement of flagella on a bacterial cell having flagella distributed on the entire surface is called
   (A) Amphitrichous
   (B) Lophotrichous
   (C) Peritrichous
   (D) Monotrichous

3 ________ is an example of Gram positive-spore forming bacteria
   (A) E. Coli
   (B) Streptococcus lactis
   (C) Salmonella typhi
   (D) Clostridium botulinum
4 If a given DNA sample has 24% Adenine the cytosine content would be ________.

(A) 24%
(B) 48%
(C) 76%
(D) 26%

5 Which of the following is palindromic sequence in DNA?

(A) GAATTC / CTAAAG
(B) TAAAA / TTTTA
(C) CCGTA / GCCAT
(D) CATTG / GTAAC

6 The aim of Recombinant DNA technology is to produce ________.

(A) saturated fat
(B) vitamins
(C) glucose
(D) a desired protein

7 The sequence of bases from where replication of DNA starts is called ________.

(A) Ori
(B) Hind II
(C) rop
(D) Coli
8. Insect resistant transgenic cotton has been produced by inserting a piece of DNA from an
(A) insect
(B) virus
(C) other variety of cotton
(D) bacterium

9. Autonomously replicating circular extrachromosomal DNA present in bacterial cell is called ________.
(A) cosmid
(B) clone
(C) vector
(D) plasmid

10. Which of the following short peptide chain is absent in the matured insulin?
(A) polypeptide chain B
(B) peptide chain C
(C) peptide chain A and polypeptide chain B both
(D) peptide chain A
11 The equivalent weight of sulfuric acid is ________.
(A) 98
(B) 63
(C) 49
(D) 36.5

12 1 molar solution of KOH 750 ml required to prepare 1 molar KOH solution.
_____ grams of KOH is required to prepare 1 N of 750 ml KOH solution.
(A) 21 grams
(B) 56 grams
(C) 42 grams
(D) 28 grams

13 0.12 molar solution of HCL, 10.5 molar solution of HCL is neutralized by 0.11 molar solution of NaOH. _____ ml of 0.11 molar NaOH solution is required to neutralize 10.5 ml of 0.12 molar HCL solution.
(A) 11.0
(B) 11.50
(C) 11.45
(D) 12.45

14 When a molecule, atom or ion gains electron it undergoes ________
(A) Ionization
(B) Hydrolysis
(C) Oxidation
(D) Reduction
15 मूषमायूत रीते सालु _______ ना बनेवा होम छे.
(A) प्राणीजन वर्चसू अने वनस्पति तेह
(B) सन्तनमायू माया भता स्वायत्त
(C) क्षाक्षरित प्रक्षेपा
(D) प्रोटी-स
Originally soaps are made from _________.
(A) Animal fats and vegetable oils
(B) Chemicals available from soil
(C) Carbohydrates
(D) Proteins

16 पाण्य माटे अपाध्यक्ष परावता पदार्थाँ माटे वैज्ञानिक शब्द _______ छे.
(A) गायेबाईलोकेक
(B) गायेबाईलोकेंड
(C) गायेबाईलोकेलॉक
(D) आनालोकस
The scientific term used for substances having no affinity for water
(A) Hydrophobic
(B) Hydroxide
(C) Hydrophilic
(D) Anhydrous

17 ठीमी सालु (Hard soaps) _______ मांथि बनेछे.
(A) पोटेशियम शार
(B) मेनेसियम शार
(C) सोडियम शार
(D) क्लासियम शार
Hard soaps are prepared from ________
(A) Potassium salt
(B) Magnesium salt
(C) Sodium salt
(D) Calcium salt
18. साजुना सोड्डीश आउट माटे _________ % NaCl-नी जुडू घेते आहे.
   (A) 5 ते 10 %
   (B) 10 ते 12%
   (C) आपल्या विकल्पांमध्ये पैकी कोणतीही नसली
   (D) 15 ते 20%

   For salting out of soap _________ % NaCl is required
   (A) 5 to 10 %
   (B) 10 to 12%
   (C) None of the given options
   (D) 15 to 20%

19. _______ वेट अपनून उदाहरण आहे.
   (A) मिथार्व वायोलेट
   (B) ईंडिगो
   (C) अंक पत्ता नसली
   (D) शीरों रेड

   _______ is an example of vat dye
   (A) Methyl violet
   (B) Indigo
   (C) None
   (D) Congo red

20. नीचे नाही आणि _______ अंशींत असू शकते.
   (A) पिक्रिक अंशींत
   (B) ईंडिगो
   (C) ऑरेंज अंशींत
   (D) मिथार्व वायोलेट

   Which of the following is an acid dye ?
   (A) Picric acid
   (B) Indigo
   (C) Orange azo
   (D) Methyl violet

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21. Indanthrene is an example of ________.

(A) Basic dye
(B) Acid dye
(C) Sulfur dye
(D) Vat dye

22. Chromophoric group of nitro dye is ________.

(A) – COOH
(B) – NO₂
(C) – NH₂
(D) – NO and – OH

23. Polymer ________ is natural polymer.

(A) Kodel
(B) Nylon
(C) Terylene
(D) Cellulose
24 Nylon is an example of _______.
(A) Polysaccharide
(B) Polyamide
(C) Polythene
(D) Polyster

25 The repeating units of polymer is known as _______.
(A) Monomer
(B) Elastomer
(C) None
(D) Dimer

26 Thermo softening plastics are made by _______.
(A) Addition polymerisation
(B) Hydrogenation
(C) Saponification
(D) Condensation polymerisation
27. Trichloroethylene is _______ drug.
   (A) Local anesthetic
   (B) Antacid
   (C) Antibiotic
   (D) General anesthetic

28. Generally _______ is used to treat acidity in stomach.
   (A) Na₂CO₃
   (B) NaOH
   (C) KOH
   (D) NaHCO₃

29. Insulin is an example of _______ drug.
   (A) Endocrine
   (B) Antacid
   (C) Antibiotic
   (D) Laxative

30. Erythromycin is an example of _______ drug.
   (A) Antacid
   (B) Antibiotic
   (C) Laxative
   (D) Endocrine
31 DDT-નું પૂર્ણ નામ _______ છે.
(A) એફ્એપી એફ્એપી ટ્રાચ્રનાહીએ બલીન
(B) એફ્એપી એફ્એપી ટ્રાચ્રનાહીએ બલીન
(C) અલગ અલગ ે એક
(D) એફ્એપી એફ્એપી ટ્રાચ્રનાહીએ બલીન

Full form of DDT is _______
(A) Diethane Dichloro Triphenyl methane
(B) Dichloro Dimethyl Trichloro Ethane
(C) Diphenyl Dichloro Triphenyl Ethane
(D) Dichloro Diphenyl Trichloro Ethane

32 _______ કાપડો લાભદાયક પ્રક્રિયાઓના પ્રભાવની મદદ કરી રહે છે.
(A) FPO
(B) PFA
(C) AGMARK
(D) Food and Drug

33 સામાન્ય રીતે સહજતમાં _______ પ્રેટીસાઇક જેવા મળે છે.
(A) BHC
(B) DDT
(C) Parathione
(D) Diphenyl Amine

Generally _______ pesticide is found in apples.
(A) BHC
(B) DDT
(C) Parathione
(D) Diphenyl Amine
34. Calorific value of fuel is determined by ________
   (A) Bomb Calorimeter
   (B) Spectrophotometer
   (C) pH meter
   (D) colorimeter

35. Gobar gas is mainly a mixture of ________
   (A) N₂ and CO₂
   (B) H₂ and CO₂
   (C) H₂S and CO₂
   (D) CH₄ and CO₂

36. The subunits of ribosomes of a prokaryotic cell are ________
   (A) 20 S and 90 S
   (B) 50 S and 30 S
   (C) 30 S and 60 S
   (D) 60 S and 40 S

37. The type of ribosomes found inside the mitochondria is ________
   (A) 70 S
   (B) 60 S
   (C) 80 S
   (D) 90 S
38 The problem statement is:

(A) DNA is conserved through cellular division.
(B) Cells divide by the process of mitosis.
(C) All of the given options are correct.
(D) The process is living.

According to cell theory:

(A) All cells divide by the process of meiosis.
(B) Cells are structural and functional units of organisms.
(C) All of the given options are correct.
(D) All cells are living.

39 The question is:

(A) Anterior
(B) Posterior
(C) Anterior
(D) Posterior

The morphology of the chromosomes is studied during ________.

(A) Interphase
(B) Prophase
(C) Telophase
(D) Metaphase

40 The question is:

(A) DNA is conserved through cellular division.
(B) DNA is conserved through mitosis.
(C) RNA is conserved through mitosis.
(D) DNA is conserved through duplication.

Sickle cell anemia disorder arises due to

(A) substitution of a single base of DNA.
(B) deletion of a segment of DNA.
(C) duplication of a base pair of RNA.
(D) duplication of segment of DNA.
41. The mother of 47-armed children is:
   (A) Klinefelter's syndrome
   (B) Turner's syndrome
   (C) Klinefelter's syndrome and Turner's syndrome
   (D) None of the above

In which of the following disorders affected individuals possess 47 chromosomes?
   (A) Klinefelter’s syndrome
   (B) Down’s syndrome
   (C) Both Klinefelter’s syndrome and Down’s syndrome
   (D) Turner’s syndrome

42. Which of the following disorders is seen in human females only?
   (A) Down’s syndrome
   (B) Haemophilia
   (C) Klinefelter’s syndrome
   (D) Turner’s syndrome

43. Cri-du-chat syndrome in humans is caused by
   (A) Loss of half of the short arm of chromosome 5
   (B) Loss of half of the long arm of chromosome 5
   (C) None of the given options
   (D) Trisomy of 21st chromosome

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44 _______ पोईंट मुटेशनानुसार कारकरण छे.
(A) लीक्ल सेव अनेमीया
(B) स्तंभण पशु
(C) क्रांप व आट फिन्स्ट्रेम
(D) अट्न फिन्स्ट्रेम

_______ is an example of point mutation.
(A) Sickle cell anemia
(B) Night blindness
(C) Cri-du-chat syndrome
(D) Down’s syndrome

45 टर्नर फिन्स्ट्रेम _______ ने बीवी बाघ छे.
(A) पोलीसोमिक रंगसूरो
(B) ट्रायनोमिक रंगसूरो
(C) मोनोसोमिक रंगसूरो
(D) पोली प्योरोडी

Turner’s syndrome is due to _______.
(A) Polysomic chromosomes
(B) Trisomic chromosomes
(C) Monosomic chromosomes
(D) Polyploidy

46 जौ माता अने पिता अनेनु ब्यांगुप 'A' हौस तौ तेमनी रंदातीम बाघार ग्रंथनी संभाजत छे.
(A) A अने O
(B) A, AB, B अने O
(C) अपेक्षा विध्यरो पिकीनु अंक पशा निक
(D) एकत्र A

Which of the following blood group could be found in progeny, if both father and mother have ‘A’ blood group?
(A) A and O
(B) A, AB, B and O
(C) None of the given options
(D) A only
The chromosome number in the human male can be written as
(A) 23 + XX
(B) 44 + XY
(C) 23 + XY
(D) 44 + XX

_____ Rickettsia rickettsii is responsible for Rocky Mountain Spotted Fever
(A) Rhizobium
(B) Streptococcus lactis
(C) None of the given options
(D) Rickettsia rickettsii

_____ is an example of Gram negative bacteria
(A) Bacillus
(B) Clostridium
(C) Streptococcus
(D) Salmonella

_____ is an example of phototrophic bacteria that produce oxygen during photosynthesis
(A) Psedomonas
(B) Mycoplasma
(C) E. Coli
(D) Anabaena