CBRT - 2019
Question Paper Grid

Government of Goa   25 August 2019

Set Name | 25082019_SET ▼

Subjects | Assistant Professor(Botany) ▼

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[Display Questions]   [Cancel]

Assistant Professor(Botany)

Itemcode : **PB1137**

Q1 : Which ministry has launched the scheme 'Indian Cyber Crime Coordination Centre (I4C)' for 2018-2020?

(a) Ministry of Corporate Affairs
(b) Ministry of Human Resource Development
(c) Ministry of External Affairs
(d) Ministry of Home Affairs
Key: **D**

Itemcode : **PB1138**

Q2 : What is the name of the satellite that India is planning to send to study the sun's corona?

(a) Aditya-L1
(b) Viraj 1
(c) Aditya-L2
(d) Viraj 2
Key: **A**

Itemcode : **PB1139**

Q3 : India celebrates National Broadcasting day on _____

(a) 23rd July
(b) 22nd July
(c) 21st July
(d) 24th July
Key: **A**

Itemcode : **PB1140**

Q4 : Which of the following is the 11th Biosphere Reserve from India to be included in the World Network of Biosphere Reserves (WNBR) of UNESCO?

(a) Pachmarhi Biosphere Reserve
(b) Great Nicobar Island Biosphere Reserve
(c) Nanda Devi Biosphere Reserve
(d) Khangchendzonga Biosphere Reserve
Key: **D**

Itemcode : **PB1141**

Q5 : Which of the following countries hosted the FIFA 2019 women's world cup?

(a) Russia
(b) Uruguay
(c) Argentina
(d) France
Key: **D**

Itemcode : **PB1142**

Q6 : The name of World's 1st Hindi-Speaking Robot is _____

(a) Jayanti
(b) Rashmi
(c) Shakshi
(d) Khatoon
Key: **B**

Itemcode : **PB1143**

Q7 : Which of the following State received the first prize in the National Water Awards ceremony under the category best state in resource management?

(a) Andhra Pradesh
(b) Maharashtra
(c) Gujarat
(d) Rajasthan
Key: **B**

Itemcode : **PB1144**

Q8 : The interactive game show named "Confetti"was launched by _____

(a) Google
(b) Facebook
(c) Microsoft
(d) Apple
Key: **B**

Itemcode : **PB1145**

Q9 : Who is the chairman of ISRO?

(a) A. S. Kiran siva
(b) G.Madhavan Nair
(c) Krishnaswamy Kasturirangan
(d) Kailasavadivoo Sivan
Key: **D**

Itemcode : **PB1146**

Q10 Name the country which will host the ICC World Cup 2023?
:

(a) India
(b) NewZealand
(c) Pakistan
(d) SriLanka
Key: **A**

Passage:
Read the following passage and answer the questions below:
Progress in life depends a good deal on crossing one threshold after another. Some time ago, a man watched his little nephew trying to write his name. It was hardwork, very hardwork. The little boy had arrived at an effort threshold. Today he writes his name with comparative ease. No new threshold confronts him. This is the way with all of us. As soon as we cross one threshold, as soon as we conquer one difficulty, a new difficulty appears, or should appear. Some people make the mistake of steering clear of thresholds. Anything that requires genuine thinking and use of energy they avoid. They prefer to stay in a rut where thresholds are not met. Probably, they have been at their job a number of years. Things are easy for them. They make no effort to seek out new obstacles to overcome. Real progress stops under such circumstances.

Some middle-aged and elderly people greatly enrich their lives by continuing to cross thresholds. One man went into an entirely new business when he was past middle life and made success of it, De Morgan didn't start to write novels until he was past sixty. Psychologists have discovered that man can continue to learn throughout his life. And it is undoubtedly better to try and fail than not to try at all. There one can be placed in the category of the Swiss mountaineer of whom it was said. "He died climbing". When a new difficulty arises to obstruct your path, do not complain. Accept the challenge. Determine to cross this threshold as you have crossed numerous other thresholds in your past. In the words of a poet, do not rest but strive to pass from dream to grander dream.

Itemcode : **PB1147**

Q11 What Obstructs real progress in life?
:

(a) Remaining at one and the same post
(b) Avoiding the thinking and energy
(c) Shunning every work
(d) Stopping education
Key: **A**

Itemcode : **PB1148**

Q12 What does progress in life depend upon?
:

(a) Good habits
(b) Hardwork
(c) Overcoming one difficulty after another
(d) Spirit of service and Cooperation
Key: **C**

Itemcode : **PB1149**

Q13 What does 'He died climbing' signify?
:

(a) He dies when he was climbing the hill
(b) He died before getting at the top
(c) He strove hard till the last moment of life
(d) He climbed the hill and then died
Key: **C**

Itemcode : **PB1150**

Q14 What does 'to pass from dream to grander dream' mean?
:

(a) Always having greater and greater aspiration in life.
(b) Seeing one good dream and then greater aspiration in life.
(c) Making plan after plan.
(d) Seeing one dream after the other.
Key: **A**

Itemcode : **PB1151**

Q15 What does De Morgan's life teach?
:

(a) That it is futile to learn many things.
(b) That one is never old in case he has vigour
(c) That it is never too late to learn
(d) That creative writing can be made even late in life
Key: **B**

Itemcode : **PB1101**

Q16 Look at this series: F2, __, D8, C16, B32, ... What number should fill the blank?
:

(a) A16
(b) G4
(c) E4
(d) E3
Key: **C**

Itemcode : **PB1153**

Q17 Look at this series: 83, 73, 93, 63, __, 93, 43, ... What number should fill the blank?
:

(a) 33
(b) 53
(c) 73
(d) 93
Key: **B**

Itemcode : **PB1154**

Q18 In the question below are given three statements followed by three conclusions numbered I, II and III, You have to take
: the given statements to be true even if they seem to be at variance from the commonly known facts. Read all the
conclusions and then decide which of the given conclusions logically follows from the given statements disregarding
commonly known facts.

Statements:

All fruits are vegetables. All pens are vegetables. All vegetables are rains.

Conclusions:

I All fruits are rains.

II All pens are rains.

III Some rains are vegetables.

(a) All follow
(b) Only I and II follow
(c) Only II and III follow
(d) Only I and III follow
Key: **A**

Itemcode : **PB1155**

Q19 Exports and imports, a swelling favourable balance of trade, investments and bank-balances, are not an index or a
: balance sheet of national prosperity. Till the beginning of the Second World War, English exports were noticeably greater
than what they are today. And yet England has greater national prosperity today than it ever had. Because the income
of average Englishmen, working as field and factory labourers, clerks, policemen, petty shopkeepers and shop
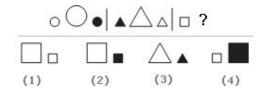assistants, domestic workers and other low-paid workers, has gone up.

The passage best supports the statement that:

(a) a country's economic standard can be best adjudged by per capital income.
(b) a country's balance of trade is the main criteria of determining its economic prosperity.
(c) a nation's economy strengthens with the increase in exports.
(d) English trade has continually increased since the Second World War.
Key: **A**

Itemcode : **PB1156**

Q20
:

(a) 1
(b) 2
(c) 3

(d) 4
Key: **B**

Itemcode : **PB1157**

Q21 Look carefully at the sequence of symbols to find the pattern. Select correct pattern.
:

(a) 1
(b) 2
(c) 3
(d) 4
Key: **A**

Itemcode : **PB1158**

Q22 Look carefully for the pattern, and then choose which pair of numbers comes next.
:

16 26 56 36 46 68 56

(a) 80 66
(b) 64 82
(c) 66 80
(d) 78 68
Key: **C**

Itemcode : **PB1159**

Q23 A sum of money is to be distributed among A, B, C, D in the proportion of 5 : 2 : 4 : 3. If C gets Euro 1000 more than
: D, what is B's share?

(a) Euro 500
(b) Euro 1500
(c) Euro 2000
(d) None of these
Key: **C**

Itemcode : **PB1160**

Q24 Here are some words translated from an artificial language.
:

slar means jump

slary means jumping

slarend means jumped

Which word could mean "playing"?

(a) clargslarend
(b) clargy
(c) ellaclarg
(d) slarmont
Key: **B**

Itemcode : **PB1161**

Q25 Complete the series
: 8, 22, 64, 190, 568, ?

(a) 1702
(b) 1315
(c) 7134
(d) 6445
Key: **A**

Itemcode : **PB1162**

Q26 Which of the following is not correctly matched?
:

(a) Brassica campestris ---------- Mustard
(b) Brassica nigra ---------- Black mustard
(c) Brassica caulorapa ---------- Candytuft
(d) Raphanus sativus ---------- Radish
Key: **C**

Itemcode : **PB1163**

Q27 Father of Indian taxonomy or systematic botany is:
:

(a) Linnaeus
(b) H. Santapau
(c) V. Puri

(d) P. Maheshwari;
Key: **B**

Itemcode : **PB1164**

Q28 : In a flower, there are five unequal petals. The posterior petal is the largest. The two anterior petals are partly fused to form a boat shape structure. The two lateral petals are smaller than posterior petal. Which one of the following characters is not associated with such a flower?

(a) The aestivation of the petals is discerningly imbricate
(b) The odd sepal is anterior
(c) The pollination is by piston mechanism
(d) The number of carpel in many.
Key: **D**

Itemcode : **PB1165**

Q29 : Which is not correct for DNA of bacteria?

(a) Double standard
(b) Right-handed and circular
(c) G-C contents more than A-T contents
(d) Histone absent
Key: **C**

Itemcode : **PB1166**

Q30 : If a bacterial cell divides in every 20 minutes, how many bacteria will be form in two hours?

(a) 4
(b) 8
(c) 16
(d) 64
Key: **D**

Itemcode : **PB1167**

Q31 : Sessile flower of only one sex are found in the inflorescence are called:

(a) Spadix
(b) Catkin
(c) Achene
(d) Panicle
Key: **B**

Itemcode : **PB1168**

Q32 : Insectivores plants kill insects because:

(a) Insect eat away their leaves
(b) Insect eat away their fruits
(c) They are heterotrophic of consumer trophic level
(d) They fulfill their requirement of nitrogen from killed insects.
Key: **D**

Itemcode : **PB1169**

Q33 : Karyotype of an organism is represented by a diagram called:

(a) Histogram
(b) Histrogram
(c) Idiogram
(d) Telegram
Key: **C**

Itemcode : **PB1170**

Q34 : ATP driven H-pump is present in which organelle?

(a) Mitochondria
(b) Chloroplast
(c) Lysosome
(d) Peroxisome
Key: **B**

Itemcode : **PB1171**

Q35 : Cytochromes, which are carrier of electrons contain which element?

(a) Co
(b) Mg
(c) Zn
(d) Fe
Key: **D**

Itemcode : **PB1172**

Q36 How the fibrils of cellulose are cemented together to form an elastic cell wall? They are cemented with the help of:
:

(a) Chitin
(b) Lignin
(c) Pectin
(d) Suberin
Key: **B**

Itemcode : **PB1173**

Q37 Prokaryotic cells lacks:
:

(a) Endopalsmic reticulum, golgi complex, mitochondria and lysosome
(b) Chloroplast, cell membrane, DNA and RNA
(c) Lysosome flagella and DNA
(d) All of the above
Key: **A**

Itemcode : **PB1174**

Q38 The two main constituents of plasma membrane are:
:

(a) Ca^{2+} and lipids
(b) Ca^{2+} and proteins
(c) Protein and carbohydrates
(d) Lipid and protein
Key: **D**

Itemcode : **PB1175**

Q39 Preparation for cell division occurs in which phase?
:

(a) G_1 - phase
(b) S- phase
(c) G_2 -phase
(d) M- phase
Key: **B**

Itemcode : **PB1176**

Q40 Synapsis is the pairing of:
:

(a) Analogous chromosome
(b) Homologous chromosome
(c) Non-Homologous chromosomes
(d) Acentric chromosome
Key: **B**

Itemcode : **PB1177**

Q41 Arrange the following events of meiosis in the correct sequence:
:   I. Terminalization
     II. Crossing over
     III. Synopsis
     IV. Disjunction of genome
     The correct sequence is:

(a) IV, III, II, I
(b) III, II, I, IV
(c) II, I, IV, III
(d) I, IV, III, II
Key: **B**

Itemcode : **PB1178**

Q42 In Prokaryotes, the first amino acid in the polypeptide chain is.
:

(a) Methionine
(b) N-methyl methionine
(c) N-formyl Methionine
(d) All of these
Key: **B**

Itemcode : **PB1179**

Q43 Which of the following acts as the inducer of lac operon?
:

(a) Glucose
(b) Latose
(c) Galactose
(d) Allolactose
Key: **D**

Itemcode : **PB1180**

Q44 Pribnow box is the component of.
:

(a) Operators
(b) Enhancers
(c) Activators
(d) Promoters
Key: **D**

Itemcode : **PB1181**

Q45 Which molecule is continuously transported from nucleus to the cytoplasm?
:

(a) DNA
(b) RNA
(c) Histone
(d) Ribosomes
Key: **B**

Itemcode : **PB1182**

Q46 Semiconservative replication of DNA was first demonstrated in.
:

(a) E.Coli
(b) Streptococcus pneumonae
(c) Salmonella typhimuriam
(d) Drosophila melanogaster
Key: **A**

Itemcode : **PB1183**

Q47 The enzyme involved in amino acid activation is.
:

(a) ATP synthetase
(b) Aminoacyl tRNA synthetase
(c) Aminoacyl mRNA synthetase
(d) Aminoacyl rRNA synthetase
Key: **B**

Itemcode : **PB1184**

Q48 Sigma factor is the component of
:

(a) DNA polymerase
(b) DNA ligase
(c) RNA polymerase
(d) Endonuclease
Key: **C**

Itemcode : **PB1185**

Q49 Unwinding of DNA is done by
:

(a) Helicase
(b) Ligase
(c) Hexonuclease
(d) Topoisomerase
Key: **A**

Itemcode : **PB1186**

Q50 The chromosome of almost all bacteria is in the shape of
:

(a) An open circle
(b) A closed circle
(c) A linear chromosome
(d) None of the above
Key: **B**

Itemcode : **PB1187**

Q51 The process by which thymine dimers are directly repaired with the help of visible light is called
:

(a) Photosynthesis
(b) Excision repair
(c) Photoreactivation
(d) Photoinhibition
Key: **C**

Itemcode : **PB1188**

Q52 The stage of meiosis in which chromosomes pair and cross over is
:

(a) Prophase I

(b) Metaphase II
(c) Anaphase I
(d) Telophase
Key: **A**

Itemcode : **PB1189**

Q53 : A mutation in a codon leads to the substitution of one amino acid with another. What is the name for this type of mutation?

(a) Nonsense mutation
(b) Missense mutation
(c) Frameshift mutation
(d) Forward mutation
Key: **B**

Itemcode : **PB1190**

Q54 : Polyploidy refers to

(a) Extra copies of a gene adjacent to each other on a chromosome
(b) An individual with complete extra sets of chromosomes
(c) Multiple ribosomes present on a single mRNA
(d) A chromosome which has replicated but not divided
Key: **B**

Itemcode : **PB1191**

Q55 : Erysiphe causes the disease

(a) Powdery mildews
(b) Downy mildews
(c) Covered smut
(d) Late blight of potato
Key: **A**

Itemcode : **PB1192**

Q56 : A haustorium of a fungus is meant for

(a) Fixing up to the mycelium to the host
(b) Increasing the spread of the disease
(c) Reproduction of the fungus
(d) Absorbing nourishment from the host
Key: **D**

Itemcode : **PB1193**

Q57 : In Phytophthora the asexual reproductive bodies behave as :

(a) Conidia
(b) Sporangia
(c) Conidiosporangia
(d) Both conidia and conidiosporangia
Key: **A**

Itemcode : **PB1194**

Q58 : Tikka disease of groundnut is caused by

(a) Aspergillus
(b) Puccinia
(c) Cercospora
(d) Fusarium
Key: **C**

Itemcode : **PB1195**

Q59 : The rusts are caused by

(a) Ustilaginales
(b) Peronosporales
(c) Uredinales
(d) Erysiphales
Key: **C**

Itemcode : **PB1196**

Q60 : The whip smut of sugarcane is caused by

(a) Ustilago maydis
(b) Ustilago hordei
(c) Ustilago scitaminea
(d) Ustilago nuda
Key: **C**

Itemcode : **PB1197**

Q61 Loose smut of wheat is caused by
:

(a) Ustilago
(b) Cystopus
(c) Puccinia
(d) Aspergillus
Key: **A**

Itemcode : **PB1198**

Q62 Neurospora sitophila is known as:
:

(a) Black mold
(b) Red mold
(c) Blue mold
(d) Green mold
Key: **B**

Itemcode : **PB1199**

Q63 Alternaria solani causes:
:

(a) Late blight of potato
(b) Wart of potato
(c) Early blight of potato
(d) Leaf curl of potato
Key: **C**

Itemcode : **PB1200**

Q64 Downy mildews are caused by the members of
:

(a) Erysiphales
(b) Taphrinales
(c) Ustilaginales
(d) Peronosporales
Key: **D**

Itemcode : **PB1201**

Q65 Ascorbate peroxidase is an antioxidant enzyme which metabolizes following reaction
:

(a) O2- to H_2O_2
(b) H_2O_2 to H_2O
(c) Ascorbate to monohydroascorbate
(d) Monohydroascorbate to ascorbate
Key: **B**

Itemcode : **PB1202**

Q66 Competitive inhibition of enzyme will show
:

(a) Unchanged Vmax but changed Km
(b) Unchanged Km but changed Vmax
(c) Changed Vmax and Km
(d) Unchanged Vmax and Km
Key: **A**

Itemcode : **PB1203**

Q67 Glycolysis is;
:

(a) Oxidative process produces pyruvate in cytosol
(b) Oxidative process produces pyruvate in mitochondria
(c) Oxygen dependent process
(d) Reductive process producing glucose in mitochondria
Key: **A**

Itemcode : **PB1204**

Q68 Which of is not a free radical?
:

(a) O_2-
(b) OH-
(c) H_2O2
(d) All of the above
Key: **C**

Itemcode : **PB1205**

Q69 Azadirachtin (Neem oil) is

:

(a) Terpene
(b) Phenol
(c) Alkaloid
(d) Flavonoid
Key: **A**

Itemcode : **PB1206**

Q70 Which is a correct statement?

:

(a) Probe based primer in RT-PCR fluoresce only when DNA is not extended
(b) SYBR green method of gene expression is more specific than probe based method
(c) Spurious amplification in RT-PCR can be ascertain by melting curve profile of the product
(d) Probe based RT-PCR is less expensive than DNA binding dye based methods
Key: **C**

Itemcode : **PB1207**

Q71 Mutation is defined as

:

(a) Modification in the sequence of nucleotides of DNA
(b) Deletion of a nucleotide
(c) Addition of a nucleotide
(d) All of the above
Key: **A**

Itemcode : **PB1208**

Q72 Which is most incorrect statement?

:

(a) cDNA clone library contain all the gene
(b) Reverse transcriptase synthesises DS DNA from SS DNA
(c) mRNA can be isolated using affinity chromatography
(d) Plasmid accommodate larger foreign DNA than phages
Key: **D**

Itemcode : **PB1209**

Q73 Which is not correct?

:

(a) Genomic library contain introns
(b) cDNA library does not represent all genes
(c) cDNA library contain fragmented gene
(d) Genomic library contain upstream and down stream sequences of gene
Key: **C**

Itemcode : **PB1210**

Q74 Floral formula; put online symbols $\oplus \female k_{(5)} C_{(5)} A_{(\infty)} \; G_{(5)}$, belongs to family:

:

(a) Malvaceae
(b) Cucurbitaceae
(c) Solanaceae
(d) None of these
Key: **A**

Itemcode : **PB1211**

Q75 Cell A has osmotic pot. = -15 bars and pressure pot. = 8 bars and cell B has osmotic pot. = -12 bars and wall pressure

: 2 bars, what is direction of flow?

(a) A$\longrightarrow$B
(b) B$\longrightarrow$A
(c) No movement
(d) A$\longleftrightarrow$B
Key: **A**