

**TEACHERS RECRUITMENT BOARD**  
**Post Graduate Assistants 2018-2019**  
**Subject – Microbiology**  
**Question Paper – Tentative key**  
**Date of Exam – 28.09.2019 & Session - AN**

- 1 The theory of spontaneous generation that living organisms could develop from non-living matter was disproved by \_\_\_\_\_ in 1861.  
The theory of spontaneous generation that living organisms could develop from non-living matter was disproved by \_\_\_\_\_ in 1861.

- A: Pasteur  
    Pasteur  
B: Spallanzoni  
    Spallanzoni  
C: Needham  
    Needham  
D: Tyndall  
    Tyndall

**Correct Alternative :- A**

- 2 According to Pasteur and Robert Koch theory which one of the following is true :  
According to Pasteur and Robert Koch theory which one of the following is true :

- A: Innoculation of such pure culture into suitable laboratory animals should produce the lesion of the disease  
    Innoculation of such pure culture into suitable laboratory animals should produce the lesion of the disease  
B: Establish the fermentation  
    Establish the fermentation  
C: A biogenesis of microorganism in putresible fluids  
    A biogenesis of microorganism in putresible fluids  
D: All of these  
    All of these

**Correct Alternative :- D**

- 3 All Gram positive bacteria are bounded by a single unit lipid membrane of about \_\_\_\_\_ thickness.  
All Gram positive bacteria are bounded by a single unit lipid membrane of about \_\_\_\_\_ thickness.

- A: 10-40 nm  
    10-40 nm  
B: 20-80 nm  
    20-80 nm  
C: 30-120 nm

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30-120 nm

D: 40-160 nm

40-160 nm

**Correct Alternative :- B**

4 Five kingdom concept does not include \_\_\_\_\_.  
Five kingdom concept does not include \_\_\_\_\_.

A: Fungi

Fungi

B: Virus

Virus

C: Plant

Plant

D: Bacteria

Bacteria

**Correct Alternative :- B**

5 Which one of the following organism produce club shaped sub terminal spores ?  
Which one of the following organism produce club shaped sub terminal spores ?

A: Clostridium bifermentans

Clostridium bifermentans

B: Clostridium Perfringens

Clostridium Perfringens

C: Clostridium tertium

Clostridium tertium

D: Clostridium tetani

Clostridium tetani

**Correct Alternative :- B**

6 Prokaryotes like \_\_\_\_\_ have more than one chromosome.  
Prokaryotes like \_\_\_\_\_ have more than one chromosome.

A: Escherichia Coli

Escherichia Coli

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B: *Borrelia burgdorferi*

*Borrelia burgdorferi*

C: *Serratia marcescens*

*Serratia marcescens*

D: *Salmonella typhimurium*

*Salmonella typhimurium*

**Correct Alternative :- B**

7 Gas vacuoles are present in \_\_\_\_\_.  
Gas vacuoles are present in \_\_\_\_\_.

A: *Bacillus anthracis*

*Bacillus anthracis*

B: *Aquaspirillum magnetotacticum*

*Aquaspirillum magnetotacticum*

C: *Borrelia burgdorferi*

*Borrelia burgdorferi*

D: *Halobacterium* and *Thiotrix*

*Halobacterium* and *Thiotrix*

**Correct Alternative :- D**

8 Endospores are present in \_\_\_\_\_.  
Endospores are present in \_\_\_\_\_.

A: *Bacillus*, *clostridium* and *sporosarcina*

*Bacillus*, *clostridium* and *sporosarcina*

B: *Staphylococcus*, *Streptococcus* and *corynebacteria*

*Staphylococcus*, *Streptococcus* and *corynebacteria*

C: *Vibrio*, *Shigella* and *Salmonella*

*Vibrio*, *Shigella* and *Salmonella*

D: *Aeromonas*, *Pseudomonas* and *Klebsiella*

*Aeromonas*, *Pseudomonas* and *Klebsiella*

**Correct Alternative :- A**

9 \_\_\_\_\_ are low molecular weight organic molecules that are able to complex with ferric iron and supply it into the cell.  
\_\_\_\_\_ are low molecular weight organic molecules that are able to complex with ferric iron and supply it into the cell.

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A: Siderophores

Siderophores

B: Acyl homoserine lactone

Acyl homoserine lactone

C: Cyclic thiolactone

Cyclic thiolactone

D: Furanosyl borate

Furanosyl borate

**Correct Alternative :- A**

10

Match the following :

(a) Barophile	(i) Natronobacterium
(b) Microaerophile	(ii) Photobacterium profundum
(c) Thermophile	(iii) Treponema Pallidum
(d) Psychrotroph	(iv) Cyanidium caldarium
(e) Alkalophile	(v) Histeria monocytogenes

A: (a)-(i), (b)-(ii) (c)-(iii), (d)-(iv), (e)-(v)

(a)-(i), (b)-(ii) (c)-(iii), (d)-(iv), (e)-(v)

B: (a)-(iii), (b)-(iv) (c)-(v), (d)-(i), (e)-(ii)

(a)-(iii), (b)-(iv) (c)-(v), (d)-(i), (e)-(ii)

C: (a)-(ii), (b)-(iii) (c)-(iv), (d)-(v), (e)-(i)

(a)-(ii), (b)-(iii) (c)-(iv), (d)-(v), (e)-(i)

D: (a)-(iv), (b)-(v) (c)-(i), (d)-(ii), (e)-(iii)

(a)-(iv), (b)-(v) (c)-(i), (d)-(ii), (e)-(iii)

**Correct Alternative :- C**

11

\_\_\_\_\_ is commonly utilised by soil microbes for the conversion of hexoses to pyruvates.

\_\_\_\_\_ is commonly utilised by soil microbes for the conversion of hexoses to pyruvates.

A: Embden - Meyerhof pathway

Embden - Meyerhof pathway

B: Etner - Duodoroff pathway

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Etner - Duodoroff pathway

C: Tricarboxylic acid cycle

Tricarboxylic acid cycle

D: Pentose phosphate pathway

Pentose phosphate pathway

**Correct Alternative :- B**

12 The conversion of pyruvate to oxaloacetate catalysed by the enzyme pyruvate carboxyl requires the cofactor \_\_\_\_\_.  
The conversion of pyruvate to oxaloacetate catalysed by the enzyme pyruvate carboxyl requires the cofactor \_\_\_\_\_.

A: Flavin adenine dinucleotide

Flavin adenine dinucleotide

B: Biotin

Biotin

C: Nicotinamide adenine dinucleotide

Nicotinamide adenine dinucleotide

D: Coenzyme A

Coenzyme A

**Correct Alternative :- B**

13 Staphylococcal enterotoxins which are protein molecules, are classified as \_\_\_\_\_.  
Staphylococcal enterotoxins which are protein molecules, are classified as \_\_\_\_\_.

A: T cell independent antigens

T cell independent antigens

B: T cell dependent antigens

T cell dependent antigens

C: Super antigens

Super antigens

D: Heterophile antigens

Heterophile antigens

**Correct Alternative :- C**

14 \_\_\_\_\_ is employed in the identification of a toxin of clostridium perfringens in clinical specimens.  
\_\_\_\_\_ is employed in the identification of a toxin of clostridium perfringens in clinical specimens.

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- A: Elek's test  
Elek's test
- B: Schick test  
Schick test
- C: CAMP test  
CAMP test
- D: Nagler's test  
Nagler's test

**Correct Alternative :- D**

- 15 High pressure liquid chromatography employs a column consisting of \_\_\_\_\_.  
High pressure liquid chromatography employs a column consisting of \_\_\_\_\_.

- A: Small particle size stationary phase and high pressure eluant pumping system  
Small particle size stationary phase and high pressure eluant pumping system
- B: Large particle size stationary phase and high pressure eluant pumping system  
Large particle size stationary phase and high pressure eluant pumping system
- C: Medium particle size stationary phase and high pressure eluant pumping system  
Medium particle size stationary phase and high pressure eluant pumping system
- D: Medium particle size stationary phase and low pressure eluant pumping system  
Medium particle size stationary phase and low pressure eluant pumping system

**Correct Alternative :- A**

- 16 Rocket immuno electrophoresis is a modification of \_\_\_\_\_ involving electrophoretic migration of antigen from walls cut in antibody containing gel.  
Rocket immuno electrophoresis is a modification of \_\_\_\_\_ involving electrophoretic migration of antigen from walls cut in antibody containing gel.

- A: Ouchterlony's double diffusion  
Ouchterlony's double diffusion
- B: Serum electrophoresis  
Serum electrophoresis
- C: Single radial immuno diffusion  
Single radial immuno diffusion
- D: Agarose gel electrophoresis  
Agarose gel electrophoresis

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**Correct Alternative :- C**

- 17 Choose the correct combination of catalysts used in SDS-PAGE.  
Choose the correct combination of catalysts used in SDS-PAGE.

- A: TEMED & 2,4, dinitrophenyl hydrazine  
TEMED & 2,4, dinitrophenyl hydrazine  
B: TEMED & Riboflavin  
TEMED & Riboflavin  
C: Riboflavin & 2,4 dinitrophenyl hydrazine  
Riboflavin & 2,4 dinitrophenyl hydrazine  
D: TEMED & Dithiothreitol  
TEMED & Dithiothreitol

**Correct Alternative :- B**

- 18 What is the molecular weight of Bovine Serum Albumin (BSA) ?  
What is the molecular weight of Bovine Serum Albumin (BSA) ?

- A: 14,300 kDa  
14,300 kDa  
B: 18,000 kDa  
18,000 kDa  
C: 24,000 kDa  
24,000 kDa  
D: 66,000 kDa  
66,000 kDa

**Correct Alternative :- D**

- 19 The behaviour of a mutant which depends either on environmental conditions or on the presence of other mutations is called a \_\_\_\_\_.  
The behaviour of a mutant which depends either on environmental conditions or on the presence of other mutations is called a \_\_\_\_\_.

- A: Leaky mutant  
Leaky mutant  
B: Conditional mutant  
Conditional mutant

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C: Suppressor Sensitive mutant

Suppressor Sensitive mutant

D: Lethal mutant

Lethal mutant

**Correct Alternative :- B**

20 The genes involved in pili synthesis are \_\_\_\_\_.  
The genes involved in pili synthesis are \_\_\_\_\_.

A: inc B, C, E

inc B, C, E

B: fin O, P

fin O, P

C: tra genes

tra genes

D: oxi T

oxi T

**Correct Alternative :- A**

21 Pick out the method that does not insure the insertion of DNA in a plasmid vector ?  
Pick out the method that does not insure the insertion of DNA in a plasmid vector ?

A: Insertional inactivation

Insertional inactivation

B: Treatment of a cleaved plasmid with alkaline phosphatase

Treatment of a cleaved plasmid with alkaline phosphatase

C: Reverse transcription

Reverse transcription

D: Cosmids

Cosmids

**Correct Alternative :- C**

22 Scorpion toxic gene has been inserted into (AcMNPV) Autographa californica multiple nucleopolyhedrovirus to kill \_\_\_\_\_.  
Scorpion toxic gene has been inserted into (AcMNPV) Autographa californica multiple nucleopolyhedrovirus to kill \_\_\_\_\_.



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A: European corn borer

European corn borer

B: Alfalfa Caterpillar

Alfalfa Caterpillar

C: Cabbage looper

Cabbage looper

D: Onion thrips

Onion thrips

**Correct Alternative :- C**

23 \_\_\_\_\_ is used as a low cost betaine source in vitamin B12 fermentation.  
\_\_\_\_\_ is used as a low cost betaine source in vitamin B12 fermentation.

A: Sugar beet molasses

Sugar beet molasses

B: Sulphide waste liquor

Sulphide waste liquor

C: Corn Steep liquor

Corn Steep liquor

D: Cane molasses

Cane molasses

**Correct Alternative :- A**

24 The basic structure of the Penicillin is \_\_\_\_\_.  
The basic structure of the Penicillin is \_\_\_\_\_.

A: Methyl Penicillin

Methyl Penicillin

B: 6 - amino pencillanic acid

6 - amino pencillanic acid

C: 4 - amino - 4 - carboxyl- n - butyl penicillin

4 - amino - 4 - carboxyl- n - butyl penicillin

D: 4 - aminopencillanic acid

4 - aminopencillanic acid

**Correct Alternative :- B**

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25 \_\_\_\_\_ is the most extensively studied and used organism in microbial leaching of ores.  
\_\_\_\_\_ is the most extensively studied and used organism in microbial leaching of ores.

A: Thiobacillus ferrooxidans

Thiobacillus ferrooxidans

B: Desulfovibrio

Desulfovibrio

C: Pseudomonas denitrificans

Pseudomonas denitrificans

D: Pseudomonas aeruginosa

Pseudomonas aeruginosa

**Correct Alternative :- A**

26 Two of the below mentioned statements are correct regarding optimum biogas formation.

- (a) Carbon/Nitrogen ratio should be less than 40 : 1
- (b) Carbon/Nitrogen ratio should be more than 50 : 2
- (c) Total Solid should be 20 - 40%
- (d) Total Solid should be 1 - 5%

Two of the below mentioned statements are correct regarding optimum biogas formation.

- (a) Carbon/Nitrogen ratio should be less than 40 : 1
- (b) Carbon/Nitrogen ratio should be more than 50 : 2
- (c) Total Solid should be 20 - 40%
- (d) Total Solid should be 1 - 5%

A: (a) and (c)

(a) and (c)

B: (a) and (d)

(a) and (d)

C: (b) and (c)

(b) and (c)

D: (b) and (d)

(b) and (d)

**Correct Alternative :- A**

27 Which of the following Marine Macro algae are used as traditional dietary Supplements ?

- (a) Ulva
- (b) Caulepra
- (c) Karenia
- (d) Laminaria
- (e) Porphyra
- (f) Alexandrium

Which of the following Marine Macro algae are used as traditional dietary Supplements ?

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- (a) Ulva
- (b) Caulepra
- (c) Karenia
- (d) Laminaria
- (e) Porphyra
- (f) Alexandrium

A: (b), (c), (d) and (e)

(b), (c), (d) and (e)

B: (a), (b), (d) and (e)

(a), (b), (d) and (e)

C: (a), (b), (c), (d) and (f)

(a), (b), (c), (d) and (f)

D: (a), (c), (d), (e) and (f)

(a), (c), (d), (e) and (f)

**Correct Alternative :- B**

28 Co-inoculation of \_\_\_\_\_ and \_\_\_\_\_ with Rhizobium have beneficial influence in increasing nodule numbers and nitrogen fixation in Soybeans.

Co-inoculation of \_\_\_\_\_ and \_\_\_\_\_ with Rhizobium have beneficial influence in increasing nodule numbers and nitrogen fixation in Soybeans.

A: Arthrobacter and Azotobacter

Arthrobacter and Azotobacter

B: Derxia and Arthrobacter

Derxia and Arthrobacter

C: Agrobacterium and Arthrobacter

Agrobacterium and Arthrobacter

D: Azotobacter and Azospirillum

Azotobacter and Azospirillum

**Correct Alternative :- D**

29 The vir genes are not expressed when Agrobacterium tumefaciens is living saprotrophically in the soil. Instead, they are induced by the presence of plant phenolics and monosaccharides present in an \_\_\_\_\_ pH.

The vir genes are not expressed when Agrobacterium tumefaciens is living saprotrophically in the soil. Instead, they are induced by the presence of plant phenolics and monosaccharides present in an \_\_\_\_\_ pH.

A: 8.2 - 8.6

8.2 - 8.6

B: 6.9 - 7.4

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6.9 - 7.4

C: 9.1 - 9.6

9.1 - 9.6

D: 5.2 - 5.7

5.2 - 5.7

**Correct Alternative :- D**

30 Which one of the following acts as a fungistatic compound which is secreted by the leaves of cicer arietinum ?  
Which one of the following acts as a fungistatic compound which is secreted by the leaves of cicer arietinum ?

A: Malic acid

Malic acid

B: Acetic acid

Acetic acid

C: Caffeic acid

Caffeic acid

D: Benzoic acid

Benzoic acid

**Correct Alternative :- A**

31 Microcystins are \_\_\_\_\_ .  
Microcystins are \_\_\_\_\_ .

A: Neurotoxic

Neurotoxic

B: Renotoxic

Renotoxic

C: Hepatotoxic

Hepatotoxic

D: Cytotoxic

Cytotoxic

**Correct Alternative :- C**

32 Name the fungi that shoots off sporangium to a height of 1 to 2 meters due to turgor pressure.  
Name the fungi that shoots off sporangium to a height of 1 to 2 meters due to turgor pressure.

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- A: Sporobolomyces  
Sporobolomyces
- B: Cochliobolus  
Cochliobolus
- C: Philobolus  
Philobolus
- D: Mycosphaerella  
Mycosphaerella

**Correct Alternative :- C**

- 33 Identify the salts used in the improvement of dough characteristics during bread making.  
Identify the salts used in the improvement of dough characteristics during bread making.

- A:  $\text{KBrO}_3$  or  $(\text{NH}_4)_2\text{S}_2\text{O}_8$   
 $\text{KBrO}_3$  or  $(\text{NH}_4)_2\text{S}_2\text{O}_8$
- B:  $\text{KIO}_3$  or  $\text{CaSO}_4$   
 $\text{KIO}_3$  or  $\text{CaSO}_4$
- C:  $\text{CaO}_2$  or  $\text{NaCl}$   
 $\text{CaO}_2$  or  $\text{NaCl}$
- D:  $\text{CaCl}_2$  or  $\text{KCl}$   
 $\text{CaCl}_2$  or  $\text{KCl}$

**Correct Alternative :- A**

- 34 \_\_\_\_\_ refers to foodborne illnesses caused by the entrance of bacteria into the body through ingestion of contaminated foods and disease is due to their presence or their metabolites.  
\_\_\_\_\_ refers to foodborne illnesses caused by the entrance of bacteria into the body through ingestion of contaminated foods and disease is due to their presence or their metabolites.

- A: Food Intoxication  
Food Intoxication
- B: Food Infection  
Food Infection
- C: Food Contamination  
Food Contamination
- D: Food Spoilage  
Food Spoilage

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**Correct Alternative :- B**

35 Fumonisin are produced by :  
Fumonisin are produced by :

- A: Penicillium notatum  
Penicillium notatum
- B: Fusarium Oxysporum  
Fusarium Oxysporum
- C: Fusarium moniliforme  
Fusarium moniliforme
- D: Claviceps purpurea  
Claviceps purpurea

**Correct Alternative :- C**

36 Choose the correct steps involved in the conversion of barley malt into beer.  
Choose the correct steps involved in the conversion of barley malt into beer.

- A: Mashing ® Malting ® Boiling ® Maturation ® Fermentation  
Mashing ® Malting ® Boiling ® Maturation ® Fermentation
- B: Mashing ® Boiling ® Malting ® Maturation ® Fermentation  
Mashing ® Boiling ® Malting ® Maturation ® Fermentation
- C: Malting ® Mashing ® Boiling ® Milling ® Fermentation  
Malting ® Mashing ® Boiling ® Milling ® Fermentation
- D: Malting ® Mashing ® Boiling ® Fermentation ® Maturation  
Malting ® Mashing ® Boiling ® Fermentation ® Maturation

**Correct Alternative :- D**

37 Caramel flavour of milk is produced by certain strains of \_\_\_\_\_.  
Caramel flavour of milk is produced by certain strains of \_\_\_\_\_.

- A: Streptococcus lactis var. maltigenes  
Streptococcus lactis var. maltigenes
- B: Enterobacter Oxytocum  
Enterobacter Oxytocum
- C: Pseudomonas Sapolactica  
Pseudomonas Sapolactica

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D: Aeromonas hydrophila  
Aeromonas hydrophila

**Correct Alternative :- A**

38 Which of the following statement is not true about Foot and Mouth disease ?  
Which of the following statement is not true about Foot and Mouth disease ?

A: High fever, blisters inside the mouth of diseased animals  
High fever, blisters inside the mouth of diseased animals

B: FMD virus can be transmitted to human beings, and the disease is characterised by clusters of papulovesicular lesions on the skin and oral Mucosa  
FMD virus can be transmitted to human beings, and the disease is characterised by clusters of papulovesicular lesions on the skin and oral Mucosa

C: Some animals are asymptomatic carriers for FMD virus  
Some animals are asymptomatic carriers for FMD virus

D: The virus responsible for the disease is a Paramyxo virus  
The virus responsible for the disease is a Paramyxo virus

**Correct Alternative :- D**

39 Which of the following invitro test used to check the toxigenicity of diphtheria bacillus ?  
Which of the following invitro test used to check the toxigenicity of diphtheria bacillus ?

A: Subcutaneous test  
Subcutaneous test

B: Intracutaneous test  
Intracutaneous test

C: Elek's gel precipitation test  
Elek's gel precipitation test

D: Ascoli's thermoprecipitation test  
Ascoli's thermoprecipitation test

**Correct Alternative :- C**

40 \_\_\_\_\_ is a genetically engineered insulin available commercially.  
\_\_\_\_\_ is a genetically engineered insulin available commercially.

A: Inulin  
Inulin

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- B: Humulin  
Humulin
- C: R-Insulin  
R-Insulin
- D: Proinsulin  
Proinsulin

**Correct Alternative :- B**

- 41 Pick up the correct statement from the following.  
The recombinant proteins secreted from yeast cells will be efficient than the proteins from bacteria, as it :
- (a) allows the formation of disulfide bonds.
  - (b) Undergoes Proteolytic maturation.
  - (c) Undergoes N- and O - linked glycosylation.
  - (d) Undergoes Post translational modifications.

Pick up the correct statement from the following.  
The recombinant proteins secreted from yeast cells will be efficient than the proteins from bacteria, as it :

- (a) allows the formation of disulfide bonds.
- (b) Undergoes Proteolytic maturation.
- (c) Undergoes N- and O - linked glycosylation.
- (d) Undergoes Post translational modifications.

- A: (d)  
(d)
- B: (b), (c)  
(b), (c)
- C: (b), (c), (d)  
(b), (c), (d)
- D: (a), (b), (c), (d)  
(a), (b), (c), (d)

**Correct Alternative :- D**

- 42 Which one of the following penicillin group of antibiotic should not be given orally ?  
Which one of the following penicillin group of antibiotic should not be given orally ?

- A: Penicillin V  
Penicillin V
- B: Penicillin G  
Penicillin G
- C: Ampicillin



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Ampicillin

D: Tetracycline

Tetracycline

**Correct Alternative :- B**

43 Monoclonal antibodies are widely used in diagnosis and research. However, they are unsuitable for the treatment of human diseases, because humans will develop hypersensitivity due to their mouse origin. What kind of modification can be done to overcome the above said issue by using genetic Engineering studies ?

Monoclonal antibodies are widely used in diagnosis and research. However, they are unsuitable for the treatment of human diseases, because humans will develop hypersensitivity due to their mouse origin. What kind of modification can be done to overcome the above said issue by using genetic Engineering studies ?

A: Cloning human antibody constant regions separately

Cloning human antibody constant regions separately

B: Making Chimeric antibodies consisting of Murine FAB variable regions and human constant regions

Making Chimeric antibodies consisting of Murine FAB variable regions and human constant regions

C: Cloning mouse antibody constant regions to human antibody binding regions to create hybrid antibody

Cloning mouse antibody constant regions to human antibody binding regions to create hybrid antibody

D: Cloning mouse antibody binding regions

Cloning mouse antibody binding regions

**Correct Alternative :- B**

44 Mycobacterium tuberculosis was discovered by :

Mycobacterium tuberculosis was discovered by :

A: Albert Neisser

Albert Neisser

B: Karl Ebertu

Karl Ebertu

C: Louis Pasteur

Louis Pasteur

D: Robert Koch

Robert Koch

**Correct Alternative :- D**

45 Microbial staining was first introduced by :

Microbial staining was first introduced by :

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- A: Robert Hooke  
Robert Hooke
- B: Louis Pasteur  
Louis Pasteur
- C: Robert Koch  
Robert Koch
- D: All of these  
All of these

**Correct Alternative :- C**

- 46 Which of the following was not discovered by Robert Koch ?  
Which of the following was not discovered by Robert Koch ?

- A: Salmonella typhi  
Salmonella typhi
- B: Bacillus anthraxis  
Bacillus anthraxis
- C: Mycobacterium tuberculosis  
Mycobacterium tuberculosis
- D: Vibrio cholerae  
Vibrio cholera

**Correct Alternative :- A**

- 47 Which of the following is called steam sterilizer ?  
Which of the following is called steam sterilizer ?

- A: Hot air oven  
Hot air oven
- B: Autoclave  
Autoclave
- C: Hybridization oven  
Hybridization oven
- D: Ethylene dioxide  
Ethylene dioxide

**Correct Alternative :- B**

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48 Fungicide acts against which of the following ?  
Fungicide acts against which of the following ?

A: Coryne bacterium  
Coryne bacterium

B: Candida  
Candida

C: Brucella  
Brucella

D: None of these  
None of these

**Correct Alternative :- B**

49 Which of the following is a method of cold sterilization method ?  
Which of the following is a method of cold sterilization method ?

A: Steam sterilization  
Steam sterilization

B: Ionising Radiation  
Ionising Radiation

C: Non-ionising radiation  
Non-ionising radiation

D: Hot air oven  
Hot air oven

**Correct Alternative :- B**

50 Which of the following filter is present in Biosafety cabinets ?  
Which of the following filter is present in Biosafety cabinets ?

A: Asbestos  
Asbestos

B: Seitz  
Seitz

C: Membrane filter  
Membrane filter

D: HEPA  
HEPA

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**Correct Alternative :- D**

- 51 UV radiation is lethal as sterilizing agent at which wavelength ?  
UV radiation is lethal as sterilizing agent at which wavelength ?

A: 160 nm  
160 nm  
B: 260 nm  
260 nm  
C: 360 nm  
360 nm  
D: 460 nm  
460 nm

**Correct Alternative :- B**

- 52 Which of the following method used for the Preservation of Bacteria ?  
Which of the following method used for the Preservation of Bacteria ?

A: Pasteurization  
Pasteurization  
B: Inspissation  
Inspissation  
C: Tyndallization  
Tyndallization  
D: Lyophilization  
Lyophilization

**Correct Alternative :- D**

- 53 Which microscopic method is used to see live cells of Treponema pallidum ?  
Which microscopic method is used to see live cells of Treponema pallidum ?

A: Phase contrast microscopy  
Phase contrast microscopy  
B: Dark field microscopy  
Dark field microscopy  
C: Confocal microscopy  
Confocal microscopy

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D: Electron microscopy  
Electron microscopy

**Correct Alternative :- B**

54 Which of the following is used to focus light on the Slide ?  
Which of the following is used to focus light on the Slide ?

- A: Objective  
Objective
- B: Eye piece  
Eye piece
- C: Immersion oil  
Immersion oil
- D: Condenser  
Condenser

**Correct Alternative :- D**

55 Freez-etching is used in which microscopy ?  
Freez-etching is used in which microscopy ?

- A: Dark-field microscopy  
Dark-field microscopy
- B: Phase-contrast microscopy  
Phase-contrast microscopy
- C: Electron microscopy  
Electron microscopy
- D: Fluorescent microscopy  
Fluorescent microscopy

**Correct Alternative :- C**

56 Gram staining is a \_\_\_\_\_ method.  
Gram staining is a \_\_\_\_\_ method.

- A: Differential staining  
Differential staining
- B: Simple staining

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Simple staining

C: Negative staining

Negative staining

D: Acid fast staining

Acid fast staining

**Correct Alternative :- A**

57 Which of the following is a negative staining method ?  
Which of the following is a negative staining method ?

A: Gram staining

Gram staining

B: India Ink staining

India Ink staining

C: Acid-fast staining

Acid-fast staining

D: Crystal violet staining

Crystal violet staining

**Correct Alternative :- B**

58 Which of the following is a basal medium used for the cultivation of bacteria ?  
Which of the following is a basal medium used for the cultivation of bacteria ?

A: Chrome agar

Chrome agar

B: Nutrient agar

Nutrient agar

C: Blood agar

Blood agar

D: Selenite F broth

Selenite F broth

**Correct Alternative :- B**

59 The commonly used membrane filter have a pore size of \_\_\_\_\_ .  
The commonly used membrane filter have a pore size of \_\_\_\_\_ .

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A: 0.22 mm

0.22 mm

B: 1.20 mm

1.20 mm

C: 0.22 m

0.22 m

D: 2.20 A°

2.20 A°

**Correct Alternative :- A**

60 Basic taxonomic unit is :  
Basic taxonomic unit is :

A: Phylum

Phylum

B: Species

Species

C: Genus

Genus

D: Cell

Cell

**Correct Alternative :- B**

61 Five kingdom concept was introduced by :  
Five kingdom concept was introduced by :

A: Whittaker

Whittaker

B: Haeckel

Haeckel

C: Woese

Woese

D: Linnaeus

Linnaeus

**Correct Alternative :- A**

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62 Which of the following is used for classification of bacteria ?  
Which of the following is used for classification of bacteria ?

- A: DNA  
DNA
- B: sRNA  
sRNA
- C: rRNA  
rRNA
- D: micro RNA  
micro RNA

**Correct Alternative :- C**

63 Which of the following is called ray fungus ?  
Which of the following is called ray fungus ?

- A: Actinomyces  
Actinomyces
- B: Rickettsiae  
Rickettsiae
- C: Mycoplasma  
Mycoplasma
- D: Salmonella  
Salmonella

**Correct Alternative :- A**

64 Enterobacteriaceae belongs to \_\_\_\_\_ Phylum.  
Enterobacteriaceae belongs to \_\_\_\_\_ Phylum.

- A: Proteobacteria  
Proteobacteria
- B: Cyanobacteria  
Cyanobacteria
- C: Mollicutes  
Mollicutes
- D: Archaea  
Archaea



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**Correct Alternative :- A**

65 \_\_\_\_\_ causes Endemic typhus.  
\_\_\_\_\_ causes Endemic typhus.

- A: Salmonella typhi  
Salmonella typhi
- B: Rickettsia typhi  
Rickettsia typhi
- C: E.coli  
E.coli
- D: Klebsiella  
Klebsiella

**Correct Alternative :- B**

66 Bergey's manual describes \_\_\_\_\_.  
Bergey's manual describes \_\_\_\_\_.

- A: Protozoan classification  
Protozoan classification
- B: Fungal classification  
Fungal classification
- C: Bacterial classification  
Bacterial classification
- D: Virus classification  
Virus classification

**Correct Alternative :- C**

67 Which organism was used to develop "one gene-one enzyme" hypothesis ?  
Which organism was used to develop "one gene-one enzyme" hypothesis ?

- A: Aspergillus flavus  
Aspergillus flavus
- B: Agaricus bisporus  
Agaricus bisporus
- C: Neurospora crassa  
Neurospora crassa

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D: Penicillium notatum  
Penicillium notatum

**Correct Alternative :- C**

68 \_\_\_\_\_ ribosomes are present in bacteria.  
\_\_\_\_\_ ribosomes are present in bacteria.

- A: 70 s ribosomes  
70 s ribosomes  
B: 90 s ribosomes  
90 s ribosomes  
C: 80 s ribosomes  
80 s ribosomes  
D: 60 s ribosomes  
60 s ribosomes

**Correct Alternative :- A**

69 Which of the following is a yeast like-fungi ?  
Which of the following is a yeast like-fungi ?

- A: Cryptococcus  
Cryptococcus  
B: Candida  
Candida  
C: Aspergillus  
Aspergillus  
D: Rhizopus  
Rhizopus

**Correct Alternative :- B**

70 Which classification takes into account all characteristics expressed at time of study ?  
Which classification takes into account all characteristics expressed at time of study ?

- A: Phylogenetic classification  
Phylogenetic classification  
B: Numerical classification

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Numerical classification

C: Adansonian classification

Adansonian classification

D: Binomial classification

Binomial classification

**Correct Alternative :- C**

71 Most of the seaweeds come under :  
Most of the seaweeds come under :

A: Phaeophyta

Phaeophyta

B: Pyrrophyta

Pyrrophyta

C: Rhodophyta

Rhodophyta

D: Chlorophyta

Chlorophyta

**Correct Alternative :- C**

72 Rhizopus stolonifer belong the division \_\_\_\_\_ .  
Rhizopus stolonifer belong the division \_\_\_\_\_ .

A: Ascomycota

Ascomycota

B: Zygomycota

Zygomycota

C: Basidiomycota

Basidiomycota

D: Deuteromycota

Deuteromycota

**Correct Alternative :- B**

73 Baltimore system is used in taxonomy of :  
Baltimore system is used in taxonomy of :

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A: Protozoa

Protozoa

B: Viruses

Viruses

C: Yeasts

Yeasts

D: Proteobacteria

Proteobacteria

**Correct Alternative :- B**

74 The principal sites of respiratory enzymes in bacteria.  
The principal sites of respiratory enzymes in bacteria.

A: Endoplasmic reticulum

Endoplasmic reticulum

B: Ribosomes

Ribosomes

C: Mesosomes

Mesosomes

D: Nucleus

Nucleus

**Correct Alternative :- C**

75 Which is the first antibody to appear during infection ?  
Which is the first antibody to appear during infection ?

A: IgG

IgG

B: IgE

IgE

C: IgM

IgM

D: IgA

IgA

**Correct Alternative :- C**

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76 Which of the following is not a bacterial adherence factor ?  
Which of the following is not a bacterial adherence factor ?

- A: Pili  
Pili
- B: Fimbriae  
Fimbriae
- C: Lipoteichoic acid  
Lipoteichoic acid
- D: Lipopolysaccharide  
Lipopolysaccharide

**Correct Alternative :- D**

77 Alcohol fermentation is an :  
Alcohol fermentation is an :

- A: Aerobic process  
Aerobic process
- B: Oxidation process  
Oxidation process
- C: Anaerobic process  
Anaerobic process
- D: Oxidation-reduction process  
Oxidation-reduction process

**Correct Alternative :- C**

78 \_\_\_\_\_ is the organism used in the production of L-Lysine.  
\_\_\_\_\_ is the organism used in the production of L-Lysine.

- A: Bacillus polymyxa  
Bacillus polymyxa
- B: Saccharomyces cerevisiae  
Saccharomyces cerevisiae
- C: Serratia marcescens  
Serratia marcescens
- D: Corynebacterium glutamicum  
Corynebacterium glutamicum

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**Correct Alternative :- B**

79 a- Amylase enzyme is produced from :  
a- Amylase enzyme is produced from :

- A: Penicillium sps  
Penicillium sps
- B: A. oryzae  
A. oryzae
- C: Saccharomyces cerevisiae  
Saccharomyces cerevisiae
- D: Serratia Sps  
Serratia Sps

**Correct Alternative :- B**

80 \_\_\_\_\_ is the carbon source used in the final production of commercial citric acid.  
\_\_\_\_\_ is the carbon source used in the final production of commercial citric acid.

- A: Corn Molasses  
Corn Molasses
- B: Starch Molasses  
Starch Molasses
- C: Rice Molasses  
Rice Molasses
- D: Beet Molasses  
Beet Molasses

**Correct Alternative :- D**

81 How many stages are required for the vinegar production ?  
How many stages are required for the vinegar production ?

- A: 5  
5
- B: 4  
4
- C: 3  
3

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D: 2  
2

**Correct Alternative :- D**

82 Conversion of an insoluble metal into a soluble form is called as \_\_\_\_\_.  
Conversion of an insoluble metal into a soluble form is called as \_\_\_\_\_.

- A: Canning  
Canning
- B: Fermentation  
Fermentation
- C: Bioremediation  
Bioremediation
- D: Agitation  
Agitation

**Correct Alternative :- C**

83 Condition in which individuals of a species live in close association with individuals of another species :  
Condition in which individuals of a species live in close association with individuals of another species :

- A: Commensalism  
Commensalism
- B: Mutualism  
Mutualism
- C: Synergism  
Synergism
- D: Symbiosis  
Symbiosis

**Correct Alternative :- D**

84 What are Reindeer Mosses ?  
What are Reindeer Mosses ?

- A: Ferns  
Ferns
- B: Lichen

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Lichen

C: Fungus

Fungus

D: Sea weeds

Sea weeds

**Correct Alternative :- B**

85 Which of the following secrete powerful lytic enzymes that degrade other bacterial cells ?  
Which of the following secrete powerful lytic enzymes that degrade other bacterial cells ?

A: Pseudomonas

Pseudomonas

B: Streptococcus

Streptococcus

C: Myxobacteria

Myxobacteria

D: Rhizobium

Rhizobium

**Correct Alternative :- C**

86 Which of the following bacteria preys upon other bacteria ?  
Which of the following bacteria preys upon other bacteria ?

A: Vibrio

Vibrio

B: Aeromonas

Aeromonas

C: Bdellovibrio

Bdellovibrio

D: Bordetella

Bordetella

**Correct Alternative :- C**

87 Enzyme used in conversion of atmospheric nitrogen to ammonia is :  
Enzyme used in conversion of atmospheric nitrogen to ammonia is :



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- A: Nitrase  
Nitrase
- B: Nitrogenase  
Nitrogenase
- C: Nitrate reductase  
Nitrate reductase
- D: Nitroferase  
Nitroferase

**Correct Alternative :- B**

- 88 Bacteria that carry - out denitrification :  
Bacteria that carry - out denitrification :

- A: Proteus Sps  
Proteus Sps
- B: Rhizopus Sps  
Rhizopus Sps
- C: Aspergillus Sps  
Aspergillus Sps
- D: Pseudomonas Sps  
Pseudomonas Sps

**Correct Alternative :- D**

- 89 Bacillus lentimorbus is an example of :  
Bacillus lentimorbus is an example of :

- A: Human pathogen  
Human pathogen
- B: Mycopathogen  
Mycopathogen
- C: Entomopathogen  
Entomopathogen
- D: Phytopathogen  
Phytopathogen

**Correct Alternative :- C**

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90 Which biopesticide is used to kill larvae of Japanese beetle ?  
Which biopesticide is used to kill larvae of Japanese beetle ?

- A: B.Popilliae  
B.Popilliae
- B: B.thuringensis  
B.thuringensis
- C: Myxobacteria  
Myxobacteria
- D: A.tumefaciens  
A.tumefaciens

**Correct Alternative :- A**

91 Which of the following is not used for degrading DDT ?  
Which of the following is not used for degrading DDT ?

- A: A. Flavus  
A. Flavus
- B: A. Paraceticus  
A. Paraceticus
- C: C. tropicalis  
C. tropicalis
- D: T. Viride  
T. Viride

**Correct Alternative :- C**

92 What is the process in which microbes with proven capabilities of degrading chemical pollutants are added ?  
What is the process in which microbes with proven capabilities of degrading chemical pollutants are added ?

- A: Biosparging  
Biosparging
- B: Bioaugmentation  
Bioaugmentation
- C: Biostimulation  
Biostimulation
- D: Bioattenuation  
Bioattenuation

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**Correct Alternative :- B**

- 93 Phosphorus mineralization leads to conversion of phosphorus to \_\_\_\_\_ that plants can assimilate.  
Phosphorus mineralization leads to conversion of phosphorus to \_\_\_\_\_ that plants can assimilate.

- A: Phosphatase  
Phosphatase  
B: Phosphate  
Phosphate  
C: Phosphoric acid  
Phosphoric acid  
D: Phosphorus chloride  
Phosphorus chloride

**Correct Alternative :- B**

- 94 Algae and cyanobacteria are often present in the \_\_\_\_\_.  
Algae and cyanobacteria are often present in the \_\_\_\_\_.

- A: Deep soil  
Deep soil  
B: Sub soil  
Sub soil  
C: Surface soil  
Surface soil  
D: Bed rock  
Bed rock

**Correct Alternative :- C**

- 95 Energy crops include plants with high in \_\_\_\_\_ content.  
Energy crops include plants with high in \_\_\_\_\_ content.

- A: Protein  
Protein  
B: Sugar  
Sugar  
C: Aminoacid  
Aminoacid

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D: Lipid  
Lipid

**Correct Alternative :- B**

96 Hemicelluloses is a :  
Hemicelluloses is a :

- A: Homopolymer  
Homopolymer
- B: Aromatic compound  
Aromatic compound
- C: Heteropolysaccharides  
Heteropolysaccharides
- D: Amine compound  
Amine compound

**Correct Alternative :- C**

97 \_\_\_\_\_ is a cellulose destroying fungi.  
\_\_\_\_\_ is a cellulose destroying fungi.

- A: Trichoderma  
Trichoderma
- B: Mucor  
Mucor
- C: Penicillium  
Penicillium
- D: Aspergillus  
Aspergillus

**Correct Alternative :- A**

98 Biogas is a breakdown of :  
Biogas is a breakdown of :

- A: Organic matter in the presence of carbon dioxide  
Organic matter in the presence of carbon dioxide
- B: Organic matter in the presence of oxygen

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Organic matter in the presence of oxygen

C: Organic matter in the absence of oxygen

Organic matter in the absence of oxygen

D: Organic matter in the absence of carbon dioxide

Organic matter in the absence of carbon dioxide

**Correct Alternative :- C**

99 Carbon-nitrogen ratio of about \_\_\_\_\_ is ideal for the raw material fed into a biogas plant.  
Carbon-nitrogen ratio of about \_\_\_\_\_ is ideal for the raw material fed into a biogas plant.

A: 01:30

01:30

B: 30 : 1

30 : 1

C: 10:30

10:30

D: 20:40

20:40

**Correct Alternative :- B**

100 \_\_\_\_\_ is the enzyme produced by microorganisms for the production of hydrogen.  
\_\_\_\_\_ is the enzyme produced by microorganisms for the production of hydrogen.

A: Protease

Protease

B: Peptidase

Peptidase

C: Hydrogenase

Hydrogenase

D: Amylase

Amylase

**Correct Alternative :- C**

101 \_\_\_\_\_ is the optimum pH for Anaerobic digestion in biogas production.  
\_\_\_\_\_ is the optimum pH for Anaerobic digestion in biogas production.

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A: 1.8 to 3.0

1.8 to 3.0

B: 6.8 to 8.0

6.8 to 8.0

C: 4.8 to 5

4.8 to 5

D: 9.0 to 9.5

9.0 to 9.5

**Correct Alternative :- B**

102 \_\_\_\_\_ produces molecular hydrogen under light conditions.  
\_\_\_\_\_ produces molecular hydrogen under light conditions.

A: Scenedesmus

Scenedesmus

B: Rhizopus

Rhizopus

C: Mucor

Mucor

D: Penicillium

Penicillium

**Correct Alternative :- A**

103 \_\_\_\_\_ was the first vaccine developed through recombinant DNA technology.  
\_\_\_\_\_ was the first vaccine developed through recombinant DNA technology.

A: MMR vaccine

MMR vaccine

B: Hepatitis B vaccine

Hepatitis B vaccine

C: DPT vaccine

DPT vaccine

D: Cholera vaccine

Cholera vaccine

**Correct Alternative :- B**

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104 \_\_\_\_\_ medium is used in the production of monoclonal antibody.  
\_\_\_\_\_ medium is used in the production of monoclonal antibody.

A: HAT

HAT

B: nutrient Agar

nutrient Agar

C: Macconkey Agar

Macconkey Agar

D: RPMI

RPMI

**Correct Alternative :- A**

105 The structure of Insulin was first described by :  
The structure of Insulin was first described by :

A: Robert Koch

Robert Koch

B: Louis pasteur

Louis pasteur

C: Frederick Sanger

Frederick Sanger

D: Vitta - Komaroff

Vitta – Komaroff

**Correct Alternative :- C**

106 Interferon is a :  
Interferon is a :

A: Antiviral agent

Antiviral agent

B: Antibacterial agent

Antibacterial agent

C: Antiparasitic agent

Antiparasitic agent

D: Antifungal agent

Antifungal agent

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**Correct Alternative :- A**

107 Human growth hormone was produced first by genetic engineering technique using :  
Human growth hormone was produced first by genetic engineering technique using :

- A: E. Coli 0157 strain  
E. Coli 0157 strain
- B: E. Coli 0150 strain  
E. Coli 0150 strain
- C: E. Coli K50 strain  
E. Coli K50 strain
- D: E.Coli K12 strain  
E.Coli K12 strain

**Correct Alternative :- D**

108 Streptomycin is produced from :  
Streptomycin is produced from :

- A: Penicillium sps  
Penicillium sps
- B: Streptomyces griseus  
Streptomyces griseus
- C: Streptomyces aureofaciens  
Streptomyces aureofaciens
- D: Streptomyces rimosus  
Streptomyces rimosus

**Correct Alternative :- B**

109 The flocculating agent used in the production of enzyme is \_\_\_\_\_.  
The flocculating agent used in the production of enzyme is \_\_\_\_\_.

- A: Calcium phosphate  
Calcium phosphate
- B: Calcium Borate  
Calcium Borate
- C: Calcium Citrate  
Calcium Citrate



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D: Calcium Chloride  
Calcium Chloride

**Correct Alternative :- A**

110 Penicillin comes under \_\_\_\_\_ group of antibiotics.  
Penicillin comes under \_\_\_\_\_ group of antibiotics.

A: a-lactam  
a-lactam

B: g-lactam  
g-lactam

C: b-lactam  
b-lactam

D: p-lactam  
p-lactam

**Correct Alternative :- C**

111 Which one of the following planets rises few hours before Sunrise ?  
Which one of the following planets rises few hours before Sunrise ?

A: Jupiter  
Jupiter

B: Mars  
Mars

C: Venus  
Venus

D: Uranus  
Uranus

**Correct Alternative :- C**

112 Bokaro Steel Plant is located in :  
Bokaro Steel Plant is located in :

A: Jharkhand  
Jharkhand

B: Odisha

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Odisha

C: West Bengal

West Bengal

D: Bihar

Bihar

**Correct Alternative :- A**

113 Which gas is present more in air ?  
Which gas is present more in air ?

A: Oxygen

Oxygen

B: Carbon-di-oxide

Carbon-di-oxide

C: Nitrogen

Nitrogen

D: Hydrogen

Hydrogen

**Correct Alternative :- C**

114 Leakage of LPG gas in our homes can be detected by mixing it with \_\_\_\_\_.  
Leakage of LPG gas in our homes can be detected by mixing it with \_\_\_\_\_.

A: Methane

Methane

B: Methane + little ethane

Methane + little ethane

C: Propane + butane

Propane + butane

D: Ethyl mercaptan

Ethyl mercaptan

**Correct Alternative :- D**

115 Which of the following process, does not require a medium ?  
Which of the following process, does not require a medium ?

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- A: Convection  
Convection
- B: Conduction  
Conduction
- C: Radiation  
Radiation
- D: All of these  
All of these

**Correct Alternative :- C**

- 116 During the period of \_\_\_\_\_ the Nalanda University was established.  
During the period of \_\_\_\_\_ the Nalanda University was established.

- A: Kumara Gupta  
Kumara Gupta
- B: Chandra Gupta Maurya  
Chandra Gupta Maurya
- C: II Chandra Gupta  
II Chandra Gupta
- D: Samudra Gupta  
Samudra Gupta

**Correct Alternative :- A**

- 117 What is the full form of 'RIELIT' ?  
What is the full form of 'RIELIT' ?

- A: Regional Institute for English Language and Information Technology  
Regional Institute for English Language and Information Technology
- B: Rehabilifation and Training  
Rehabilifation and Training
- C: Regional Institute of e-learning and Information Technology  
Regional Institute of e-learning and Information Technology
- D: Research Institute for English Literature  
Research Institute for English Literature

**Correct Alternative :- C**

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118 During Second Carnatic War whom the French supported ?  
During Second Carnatic War whom the French supported ?

- A: Muza Far Sung, Muhammed Ali  
Muza Far Sung, Muhammed Ali
- B: Nazirsung, Anwaruddin  
Nazirsung, Anwaruddin
- C: Muzafar Sung, Chandasaheeb  
Muzafar Sung, Chandasaheeb
- D: Muzafar Sung, Anwaruddin  
Muzafar Sung, Anwaruddin

**Correct Alternative :- C**

119 Expansion of VVPAT \_\_\_\_\_.  
Expansion of VVPAT \_\_\_\_\_.

- A: Voters Verified Paper Account Trail  
Voters Verified Paper Account Trail
- B: Voters Verified Paperless Account Trail  
Voters Verified Paperless Account Trail
- C: Voters Verified Paperless Audit Trail  
Voters Verified Paperless Audit Trail
- D: Voters Verified Paper Audit Trail  
Voters Verified Paper Audit Trail

**Correct Alternative :- D**

120 The country which is called the "Museum of Human Race" :  
The country which is called the "Museum of Human Race" :

- A: Malaysia  
Malaysia
- B: Switzerland  
Switzerland
- C: India  
India
- D: Japan  
Japan

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**Correct Alternative :- C**

121 The name Stephen M. Corey is associated with \_\_\_\_\_.  
The name Stephen M. Corey is associated with \_\_\_\_\_.

- A: Action Research  
Action Research
- B: Instructional designing  
Instructional designing
- C: e-content designing and development  
e-content designing and development
- D: Mobile learning  
Mobile learning

**Correct Alternative :- A**

122 Difficulty in learning and remembering names, telephone numbers, multiplication tables but possible good performances in analytic and intuitive tasks that do not involve memory, these can be categorized under \_\_\_\_\_.  
Difficulty in learning and remembering names, telephone numbers, multiplication tables but possible good performances in analytic and intuitive tasks that do not involve memory, these can be categorized under \_\_\_\_\_.

- A: Poor ability to combine movement and vision  
Poor ability to combine movement and vision
- B: Poor grasp of sequence  
Poor grasp of sequence
- C: Gaps in general knowledge  
Gaps in general knowledge
- D: Problems in style of learning  
Problems in style of learning

**Correct Alternative :- D**

123 \_\_\_\_\_ denotes the law or science of work. The study of a specific kind of behaviour : that of a man making a programmed physical or mental effort in return for some remuneration.  
\_\_\_\_\_ denotes the law or science of work. The study of a specific kind of behaviour : that of a man making a programmed physical or mental effort in return for some remuneration.

- A: Cybernetics  
Cybernetics
- B: Devaluation

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Devaluation

C: Synergism

Synergism

D: Ergonomics

Ergonomics

**Correct Alternative :- D**

- 124 In the skill of probing questions \_\_\_\_\_ component represents that, 'questions which seek from the pupil to compare the phenomenon with other phenomenon for similarity or contrast or for any other relationship'.  
In the skill of probing questions \_\_\_\_\_ component represents that, 'questions which seek from the pupil to compare the phenomenon with other phenomenon for similarity or contrast or for any other relationship'.

A: Prompting (P)

Prompting (P)

B: Seeking Further Information (SFI)

Seeking Further Information (SFI)

C: Re-Focussing (RF)

Re-Focussing (RF)

D: Increasing Critical Awareness (ICA)

Increasing Critical Awareness (ICA)

**Correct Alternative :- C**

- 125 The Government of India appointed a committee on Correspondence Courses and evening colleges in 1961 under the chairmanship of \_\_\_\_\_.  
The Government of India appointed a committee on Correspondence Courses and evening colleges in 1961 under the chairmanship of \_\_\_\_\_.

A: K.L. Shrimali

K.L. Shrimali

B: V.V. Giri

V.V. Giri

C: D.S. Kothari

D.S. Kothari

D: Prof. M.V. Mathur

Prof. M.V. Mathur

**Correct Alternative :- A**

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126 Which concept will be mostly formed when celebration of festivals is taught in class ?  
Which concept will be mostly formed when celebration of festivals is taught in class ?

- A: Number  
Number
- B: Social environment  
Social environment
- C: Physical environment  
Physical environment
- D: Colour  
Colour

**Correct Alternative :- B**

127 In \_\_\_\_\_ reinforcement schedule the organism is rewarded for a response made only after a span of time.  
In \_\_\_\_\_ reinforcement schedule the organism is rewarded for a response made only after a span of time.

- A: Continuous  
Continuous
- B: Fixed interval  
Fixed interval
- C: Fixed ratio  
Fixed ratio
- D: Variable  
Variable

**Correct Alternative :- B**

128 \_\_\_\_\_ has coined the phrase " learning set" to describe the phenomenon of learning how to learn.  
\_\_\_\_\_ has coined the phrase " learning set" to describe the phenomenon of learning how to learn.

- A: Harry Harlow  
Harry Harlow
- B: Charles Judd  
Charles Judd
- C: Ivan Pavlov  
Ivan Pavlov
- D: Alfred Binet  
Alfred Binet

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**Correct Alternative :- A**

- 129 In retrieval tasks, the tendency for items at the beginning and at the end of a list to be recalled more readily is called as \_\_\_\_\_.
- In retrieval tasks, the tendency for items at the beginning and at the end of a list to be recalled more readily is called as \_\_\_\_\_.

- A: Recency effect  
Recency effect
- B: Serial position effect  
Serial position effect
- C: Primacy effect  
Primacy effect
- D: Latency effect  
Latency effect

**Correct Alternative :- B**

- 130 Which theory emphasized in its hypothesis the role of the hippocampal formation and its close association with the amygdala ?
- Which theory emphasized in its hypothesis the role of the hippocampal formation and its close association with the amygdala ?

- A: Maclean's theory of emotions  
Maclean's theory of emotions
- B: Papez's theory of emotions  
Papez's theory of emotions
- C: Arnold's theory of emotions  
Arnold's theory of emotions
- D: Schachter's theory of emotions  
Schachter's theory of emotions

**Correct Alternative :- A**

- 131 \_\_\_\_\_ of the Indian Constitution deals with the promotion of educational and economic interest of the scheduled castes, scheduled tribes and other weaker sections.
- \_\_\_\_\_ of the Indian Constitution deals with the promotion of educational and economic interest of the scheduled castes, scheduled tribes and other weaker sections.

- A: Article 42  
Article 42



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B: Article 22

Article 22

C: Article 26

Article 26

D: Article 46

Article 46

**Correct Alternative :- D**

132 Howard Gardner's Multiple Intelligence Theory describes \_\_\_\_\_ types of intelligence.  
Howard Gardner's Multiple Intelligence Theory describes \_\_\_\_\_ types of intelligence.

A: 6

6

B: 7

7

C: 8

8

D: 10

10

**Correct Alternative :- C**

133 \_\_\_\_\_ popularized teaching machines in learning.  
\_\_\_\_\_ popularized teaching machines in learning.

A: Spearman

Spearman

B: Skinner

Skinner

C: Thorndike

Thorndike

D: Piaget

Piaget

**Correct Alternative :- B**

134 \_\_\_\_\_ is an example of instrumental conditioning based on negative reinforcement.  
\_\_\_\_\_ is an example of instrumental conditioning based on negative reinforcement.

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- A: Concept based learning  
Concept based learning
- B: Lateral learning  
Lateral learning
- C: Insightful learning  
Insightful learning
- D: Trial and error learning  
Trial and error learning

**Correct Alternative :- C**

- 135 \_\_\_\_\_ interest indicates a preference for meeting and dealing with people and promoting projects for things to sell.  
\_\_\_\_\_ interest indicates a preference for meeting and dealing with people and promoting projects for things to sell.

- A: Scientific  
Scientific
- B: Literary  
Literary
- C: Social service  
Social service
- D: Persuasive  
Persuasive

**Correct Alternative :- D**

- 136 NCERT conducted the second All India Educational Survey in the year\_\_\_\_\_.  
NCERT conducted the second All India Educational Survey in the year\_\_\_\_\_.

- A: 1965  
1965
- B: 1971  
1971
- C: 1972  
1972
- D: 1969  
1969

**Correct Alternative :- A**

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- 137 If a counsellor has recorded highly confidential information about a student, this record should be filed separately, this is done contextually and be termed as \_\_\_\_\_.  
If a counsellor has recorded highly confidential information about a student, this record should be filed separately, this is done contextually and be termed as \_\_\_\_\_.

- A: Authenticity  
Authenticity  
B: Objectivity  
Objectivity  
C: Reliability  
Reliability  
D: Secrecy  
Secrecy

**Correct Alternative :- D**

- 138 Evaluation whether the diagnostic, formative (or) summative may play its role in exercising few functions related with devising of the teaching-learning tasks. This is related to \_\_\_\_\_.  
Evaluation whether the diagnostic, formative (or) summative may play its role in exercising few functions related with devising of the teaching-learning tasks. This is related to \_\_\_\_\_.

- A: Motivational functions  
Motivational functions  
B: Planning functions  
Planning functions  
C: Informational or communicational functions  
Informational or communicational functions  
D: Decision making functions  
Decision making functions

**Correct Alternative :- B**

- 139 The chief principle of \_\_\_\_\_ philosophy is that man creates his own values; there are no fixed eternal truths.  
The chief principle of \_\_\_\_\_ philosophy is that man creates his own values; there are no fixed eternal truths.

- A: Realism  
Realism  
B: Existentialism  
Existentialism

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- C: Naturalism  
Naturalism  
D: Pragmatism  
Pragmatism

**Correct Alternative :- D**

140 \_\_\_\_\_ is a type of fixation in which an individual tries to solve a problem in a particular way that has worked in the past.  
\_\_\_\_\_ is a type of fixation in which an individual tries to solve a problem in a particular way that has worked in the past.

- A: Apperception  
Apperception  
B: Assimilation  
Assimilation  
C: Shaping  
Shaping  
D: Mental Set  
Mental Set

**Correct Alternative :- D**

141 This test is used as an indicator of aptitude for bench work which involves rapid manipulation of objects :  
This test is used as an indicator of aptitude for bench work which involves rapid manipulation of objects :

- A: Finger Dexterity Test  
Finger Dexterity Test  
B: Clerical Ability Test  
Clerical Ability Test  
C: Mechanical Aptitude Test  
Mechanical Aptitude Test  
D: O' Connor's Wiggly Block Test  
O' Connor's Wiggly Block Test

**Correct Alternative :- A**

142 In Herbartian approach to lesson planning \_\_\_\_\_ step is related with the task of strengthening the acquisition of new learning material.  
In Herbartian approach to lesson planning \_\_\_\_\_ step is related with the task of strengthening the acquisition of new learning material.

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A: Presentation

Presentation

B: Comparison (or) Association

Comparison (or) Association

C: Generalization

Generalization

D: Application

Application

**Correct Alternative :- B**

- 143 The Constitution (86<sup>th</sup> amendment) Act of \_\_\_\_\_ year inserted \_\_\_\_\_ Article in the Constitution of India to provide free and compulsory education of all children in the age group of 6 to 14 years as a Fundamental right.  
The Constitution (86<sup>th</sup> amendment) Act of \_\_\_\_\_ year inserted \_\_\_\_\_ Article in the Constitution of India to provide free and compulsory education of all children in the age group of 6 to 14 years as a Fundamental right.

A: 2001, Article 46

2001, Article 46

B: 2010, Article 12-A

2010, Article 12-A

C: 2009, Article 45-A

2009, Article 45-A

D: 2002, Article 21-A

2002, Article 21-A

**Correct Alternative :- D**

- 144 Based on Gagne's hierarchy of learning, in \_\_\_\_\_ learning the learner acquires the ability to understand the common properties of a group of substances that might still vary from one another.  
Based on Gagne's hierarchy of learning, in \_\_\_\_\_ learning the learner acquires the ability to understand the common properties of a group of substances that might still vary from one another.

A: Verbal association

Verbal association

B: Multiple discrimination

Multiple discrimination

C: Concept learning

Concept learning

D: Rule learning

Rule learning

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**Correct Alternative :- C**

- 145 The policy statement was made in Parliament on April 5, 1977 declaring that along with UEE, highest priority in educational planning would be accorded to \_\_\_\_\_.  
The policy statement was made in Parliament on April 5, 1977 declaring that along with UEE, highest priority in educational planning would be accorded to \_\_\_\_\_.

- A: UPE  
UPE  
B: Secondary Education  
Secondary Education  
C: Higher Education  
Higher Education  
D: Adult Education  
Adult Education

**Correct Alternative :- D**

- 146 The teacher must provide identity between historical and present-day events is an example of :  
The teacher must provide identity between historical and present-day events is an example of :

- A: The principle of multiple response  
The principle of multiple response  
B: The principle of mental set  
The principle of mental set  
C: The principle of partial activity  
The principle of partial activity  
D: The principle of assimilation  
The principle of assimilation

**Correct Alternative :- D**

- 147 UGC launched the \_\_\_\_\_ project on August 15, 1984.  
UGC launched the \_\_\_\_\_ project on August 15, 1984.

- A: CIET  
CIET  
B: CWCR  
CWCR

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- C: SITE  
SITE  
D: PLAN  
PLAN

**Correct Alternative :- B**

- 148 The \_\_\_\_\_ is a technique that provides the counsellor with an opportunity to understand a client's knowledge regarding a topic such as career information.  
The \_\_\_\_\_ is a technique that provides the counsellor with an opportunity to understand a client's knowledge regarding a topic such as career information.

- A: In take interviews  
In take interviews  
B: Guess who  
Guess who  
C: Sociometric  
Sociometric  
D: Card sort  
Card sort

**Correct Alternative :- D**

- 149 "Behaviour that occurs at a naturally high rate of frequency may be used to reinforce behaviour that occurs at a naturally low rate of frequency" is :  
"Behaviour that occurs at a naturally high rate of frequency may be used to reinforce behaviour that occurs at a naturally low rate of frequency" is :

- A: Programmed instruction  
Programmed instruction  
B: Operant conditioning  
Operant conditioning  
C: Halo effect  
Halo effect  
D: Premack principle  
Premack principle

**Correct Alternative :- D**

- 150 The Central Hindu College at Benaras was founded by \_\_\_\_\_ in \_\_\_\_\_.

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The Central Hindu College at Benaras was founded by \_\_\_\_\_ in \_\_\_\_\_.

- A: Ishwar Chandra Vidyasagar, 1901  
Ishwar Chandra Vidyasagar, 1901
- B: Swami Dayanand Saraswathi, 1875  
Swami Dayanand Saraswathi, 1875
- C: Sri Ramakrishna Mission, 1915  
Sri Ramakrishna Mission, 1915
- D: Annie Besant, 1898  
Annie Besant, 1898

**Correct Alternative :- D**