**Sample question**

**Paper- CRH-MICRO BIO-SEC-01**

1. which of the following is Carrier based inoculums?

a). Biofertilizer b). Pesticide c). Chemical fertilizer d). none of the above.

2. Biofertilizer is what type of inoculants?

a). viable microbial inoculants b). chemical inoculants c) Both a & b d) none of the above

3. Which of the following carrier material used for making Biofertilizer are-

a). soil b). peat c) lignite d) Both b & c

4. Which of the following term denotes “Nutrient inputs of biological origin for plant growth”

a). Biofertilizer b). bacterization c). Rhizobium d) none of these

4. Which of the following is a technique of seed dressing with bacteria?

a). Crop transplantation b) Mother culture c) Bacterization d) none of these

5. Which technique is used for maintain mother culture for long time?

a). Incubation b). Sub-culturing c) both a and b d) none of these

6. YEMA medium is use for which of the following bacteria?

a) Rhizobium b) Aspergillus c) E.coli d). Bacillus

7. Mycorrhiza, develops as a result of –

a). fungi and plant root association b) bacteria and fungi association c) both a & b c) fungi and algae associaltion

8. Fungus-root means…………………….?

a)Lichens b)Mycorrhizae c)PSM d) both a & b

9. YEMA Stands for-

a) Yeast extract mannose agar b) Yeast extract mannitol agar c) yeast eosin mannitol agar d) none of these.

10. Which of the following medium is use for isolation of Frankia?

a) Q mod medium b) Nutrient agar c) potato dextrose agar d) both b & c

11. Cyanobacteria is beneficial for which crop?

a)potato b) Rice c) wheat d) none of the above

12 .Who discovered fungus root?

a) Robert Koch b) Louis Pasteur c) Frank d) Beijernick

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a)Lichens b)Mycorrhizae c)PSM d) both a & b

16. Which of the following is a blue-green algae?

a) Fungi b) rhizobium c) cyanobacteria d) all of these

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18. Ectomycorrhizae forms external pseudochyamotus sheath, known as

a) Mycorrhizae b)Mantle c) hypahe d) spore

19. Which stain is use for fungal staining

a) gram’s stain b) malachite stain c) lactophenol cotton blue d) carbol fushin

20 Endomycorrhizae found in …………………

a) all plant kingdom, b) lichen, c) gymnosperms d) both b & c

21 Ectendomycorrhizae develops relation similar to—

a) . Ecto & endo mycorrhizae b) only ectomycorrhizae c) only endomycorrhizae d) none of these

22. For Mass inoculums production which instrument are used?

a) incubator, b) rotar shaker incubator c). Fermentor d). autoclave

23. In which form phsopahte present in soil

a) lnorganic b)inorganic and organic c)organic d) decaying matter

24. Which medium is use for Phosphate solubilizers microorganisms

a) Pikovaskaya media b) Nutrient agar medium c) PDA D) LBA

25) The biofertilizer present in the roots of legumes is

a) Anabaena b) Rhizobium c) Azospirillum d) All of the above

26) symbiotic biofertilizer is

a) Nitrosomonas b) Rhizobium c) Azotobacter d) Azospirillum

27) which stain use for fungal staining?

a) Gram’s staining b) malachite staining c) c) lactophenol cotton blue d) carbol fushin

28). VAM produced by which technique

a)Pot culture technique b) vermicompost c) both a & b d) none of these

29). What is require for VAM production

a) bacteria b) VAM spore c) both a & b d). none of these.

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32) The ectomycorrhizae forms an intercellular network in root cortex known as

a). haustoria b) vesicles c) arbuscular d) hartig net

33) Mycorrhizae are formed by many members of the genus

a) Rhizobium b) Azotobacter c) Azospirillum d) glomus

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a) bacteria b) VAM spore c) both a & b d). none of these.

36). Which is confirmative test for *Rhizobium*

a) Microscopic examination b) Glucose phosphate agar c) staining method d)none of these.

37). Which of the following is not the biofertilizer producing bacteria?

a). Nostoc b) Anabaena c) Both a & b d) Clostridium

38). Example of symbiotic nitrogen fixers are

a). Azotobacter b) Beijerinckia c) Clostridium d) Rhizobium

39) The group of bacteria which have the ability to fix nitrogen from air to soil are

a) symbiotic b) non symbiotic c) both a) and b) d) none of these

40). Which of the following bacteria require influence of light during incubation

a). cyanobacteria b) Aztobacter c) Rhizobium d). both b and c

41). Cyanobacteria isolation medium –

a) nutrient agar b) Fogg’s medium c) PDA d) none of these

42). By which method Cyanobacteria mass inoculums are produced?

a). Cemented tank method b) vermicompost c) both a and b d) none of these

43)Rhizonit fertilizer benifical for which crop

a) Rice b)wheat c) legumes d) both a & b

44). Plants absorbs Phosphate in which form

a) soluble form , b) insoluble form c) do not absorbs phosphorus d) none of these

45). In which form ectomycorrhizae are applied in field

a)Mycobeads b) farmland manure c). slurry d). both b & c

46) Which of the following are use for neutralizing pH of biofertilizer

a) HCl b) CaCO3 c) sodium hypochloride d) both a and c

47) why gum arabic is use in slurry prepration

a) to make slurry sticky b) to prevent insects c) neutralize biofertiliser d) none of these

48). The arbuscules are surrounded by a plant derived membrane called

a). vesicles b) periarbuscular space c) both a & b d) none of these

49). Which of the following bacteria are phosphate solubilizers

a). Bacillus b) Psuedomonas c) Aspergillus d) both a & b

50) Insecticides kill

|  |  |
| --- | --- |
| a) | Harmful insects b) both harmful and useful insects c) specific plant d) only plant pests |

51). Which of the following bacteria are Non-symbiotic nitrogen fixers-

a) Rhizobium b) PSM C) Azospirillum d) Baciilus

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61). Which of the following bacteria are phosphate solubilizers

a). Bacillus b) Psuedomonas c) Aspergillus d) both a & b

62). Cyanobacteria multiplication the field should be-

a). dry b) fertile c)water-logged condition d) none of these

63). By which method carrier based inoculums can be applied in field –

a) top dressing method b) seedling c) seed d) all of these

64). In VAM production, pot substrate ‘sand:soil’ should be in the ratio of-

a) 1:25 w/w b) 1:1w/w c) 2:2 w/w d) all of these

65). Which medium is use for Phosphate solubilizers microorganisms

a) Pikovaskaya media b) Nutrient agar medium c) PDA D) LBA

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74). Which species of *Azolla* use in India?

a) *A. caroliniana,* b) *A. filiculoides,* c)  *A. Mexicana* d) *A. pinnata*

75). ‘Dogger G’ to control damping off cotton manufacture by which of following bacteria?

a) Bacillus thuringiensis b) Bacillus subtilis c)Bacillus licheniformis d) all of these

76). Which of the following is Azolla?

a) Bacteria b) Aquatic fern c) algae d) Fungi

78). Which of the following require light intensity during incubation?

a) Azolla b) Bacteria c)Fungi d) none of these

79). Which stain are use for Azolla?

a) gram stain b) lactophenol cottn blue c) ruthenium red d) congo red.

80). Parasporal crystal contains crystal protein known as………………………

a) endotoxins b) exotoxins c) both a & b d) none of these.

81). AM fungi produce vesicles therefore known as ……..

a) fungus root b) mycorrhizae c) vesicular arbuscular mycorrhizae d) fungi

82). Nitragen first introduced by –

a) Louis Pastuer b)Robert Koch c) Nobbe and Hitlner d) both a & b.

83) Bioinsectides formulations consists –

a). microbes b) chemical c) mycorrhizae d)insects

84). The interface between periarbuscular membrane and fungal plasma memebrane called

a) Periarbuscular space b) ectomycorrhizae c) hartig net d) mantle

85). *Bacillus thuringenesis*  form-

a) protein crystal inclusion body b) amino acid c) both a & b d) none of these

86). Who discovered *Bacillus thuringenesis*

a) Ishiwata b) Robert koch c) L Pasteur d) none of these

87). Azolla is beneficial for which crop?

a) Wheat b) Rice c) Legumes d) all

88). Which of the following endophytic bacterium found in *Azolla*?

a) Cyanobacteria b) E.coli c) Bacillus d)Pseudomonas

89). Bacillus thuringiensis produces a crystalline inclusion known as……………

a) gram positive b) parasporal crystal c) biofertiliser d) all are correct

90). Azolla biofertiliser is known as……………

a) green manure b) mycorrhizae c)bioinsecticide d)fungicide