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MCQ QUESTIONS

Maintenance of electric equipment

TOUR2TECH

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Unit 1 – safety and prevention of accidents

1. Most accidents are caused by

- a) Bad weather
- b) People**
- c) Equipment
- d) Poor direction

2. If I see an electrical hazard I should

- a) Report it immediately**
- b) Fix it on my near break
- c) Not use the equipment
- d) A & B

3. The following are physical hazards agents

- a) Falls
- b) Electricity
- c) Inhalation
- d) All of above**

4. Safety signs provide

- a) Information about hazardous area
- b) Cautions information
- c) Warnings
- d) All of above**

5. Avoid working in _____ conditions

- a) Cold
- b) Dry
- c) Sunny
- d) Wet**

6. _____ is a potential condition waiting to be converted into an unwanted event and accidents

- a) Safety
- b) Accident
- c) Hazard**
- d) Responsibility

7. An unwanted events which can be anticipated in advance is called as an _____

- a) Safety
- b) Accident**
- c) Hazard
- d) Responsibility

8. Which is a method which can minimize the unwanted events or accidents

- a) Safety**
- b) Accidents
- c) Hazards
- d) Responsibility

9. Which of the following is not the cause of electrical accidents

- a) Lack of knowledge
- b) Without maintaining discipline
- c) Neglecting the order of supervisor
- d) Use of proper safety devices**

10. What are the reasons of getting an electric shock

- a) Burning of body
- b) Death of a person
- c) Stopping of breathing action
- d) All of above**

11. following which is not the type of a fire extinguisher

- a) CO₂
- b) Foam
- c) Soda acid
- d) Nitrogen**

12. What are the causes of fire due to electric fault

- a) Overloading of machinery
- b) Failure of earthing system
- c) Loose connections
- d) All of above**

13. Which of the following factor doesn't affect severity of shock and body resistance

- a) Inductance of body**
- b) Voltage and current of supply system
- c) Area of contact of body to machine part
- d) Resistance of body**

14. When 1 to 4 Ma current flows in human body (shock effect)

- a) Some muscles may damage
- b) Can be sensed**
- c) Painful
- d) Instant death

15. Why CO₂ extinguisher can be used in almost 90% applications.

- a) Effective cooling
- b) Use on live electric circuit
- c) Bad conductor of electricity
- d) All of above**

16. Any menthol or process or technique which can minimum unwanted events or accidents is called as .

- a) Safety**
- b) Hazard
- c) Accident
- d) Responsibility

17. A ____ is a potential condition a waiting to be converted in an unwanted event or accident.

- a) Safety
- b) Hazard**
- c) Accident
- d) Responsibility

18. Electric accident may results

- a) Body of injury
- b) Buming of a part of body
- c) Death of a person
- d) All of the above**

19. 100-200 mA current flows throw human body then results

- a) Not painful
- b) Medium but painful
- c) Severe muscular contraction, Breathing becomes difficult
- d) Heart stop, Instant death**

20. Severity of shock depends on which factor

- a) Supply system DC or AC
- b) Resistance of body
- c) Voltage and current strength of system
- d) All of above**

21. Which of the following condition does not follow by cleft supervisor?

- a) Use correct size & quality fuse wire while renewing blown fuse
- b) Tests rubber gloves periodically.
- c) **Use wire with poor insulation**
- d) Place rubber mats in front of electrical switch boards.

22. Class 'A' fire is used against which fire

- a) **Fire involves wood, paper, cloths, rubber etc**
- b) Fire involves liquid greases, petroleum products
- c) Fire involves flammable gases, liquefied gases
- d) Fire involves combustible metals such as sodium, magnesium, zinc, potassium

23. Which are the fire extinguishers used against electric fire?

- a) Dry powder Extinguishers
- b) Carbon tetrachloride Extinguishers
- c) Methyl Bromide Extinguishers
- d) Carbon Dioxide Gas Extinguishers
- e) **All of the above**

24. Purpose of Earthing is

- a) Safety to personnel
- b) Fire protection
- c) Protection against electric shock
- d) **All of the above**

25. Which of the following is not a cause of electric accident

- a) Without maintaining discipline
- b) Lack of knowledge
- c) Neglecting the order of supervisor
- d) **Use of proper safety devices**

26. What are the causes of fire due to electric fault

- a) Overloading of machinery
- b) Failure of earthing system
- c) Loose connection
- d) **All of the above**

27. Why CO₂ Extinguisher used in most of applications

- a) Effective cooling
- b) Use on live electric circuit
- c) Bad conductor of electricity
- d) **All of the above**

28. earth potential is

- a) **Zero**
- b) infinite
- c) Medium
- d) Small

29. The Earth wire and Earth electrode resistance is

- a) Very High
- b) **Very Small**
- c) Medium
- d) None of the above

30. The Earth electrode should be kept (Plate or Pipe)

- a) **Vertical**
- b) Horizontal
- c) Vertical or Horizontal
- d) None of the above

Unit 2 – maintenance schedules

1. Maintenance work is carried out to prevent

- a) Damage
- b) Breakdown
- c) Obstacle
- d) All of above**

2. Maintenance of machine is important because

- a) To increase the life of machine
- b) Working satisfactory
- c) To decrease the life of machine
- d) A & B**

3. Which of the following are maintenance schedule

- a) Routine
- b) Breakdown
- c) Preventive
- d) All of above**

4. The maintenance performed on regular basis to reduce the likelihood of failure is

- a) Routine maintenance
- b) Breakdown maintenance
- c) Preventive maintenance**
- d) Predictive maintenance

5. Preventive maintenance is also called as ____

- a) Breakdown maintenance
- b) Preventive maintenance
- c) Routine maintenance
- d) Planned maintenance**

6. Preventive maintenance and its application is an expensive process.

- a) True**
- b) False

7. The maintenance activities such as regular inspections or machine servicing. _____ Maintenance is done on regular basis, whether that be daily, weekly, monthly or yearly.

- a) Routine maintenance**

- b) Breakdown maintenance
- c) Preventive maintenance
- d) Predictive maintenance**

8. Routine maintenance is also called as _____

- a) Predictive maintenance**
- b) Cyclical maintenance
- c) Breakdown maintenance
- d) None

9. The maintenance performed on equipment that has broken down and is unusable is

- a) Routine maintenance
- b) Predictive maintenance
- c) Breakdown maintenance**
- d) All of above

10. Breakdown maintenance is also known as _____

- a) Corrective maintenance**
- b) Predictive maintenance
- c) Breakdown maintenance
- d) None

11. Which factors affecting preventive maintenance schedule

- a) Age of machine
- b) Failure of machine
- c) None
- d) A & B**

12. _____ Techniques are designed to help determine the condition of in service equipment in order to estimate when maintenance should be performed.

- a) Routine maintenance
- b) Preventive maintenance
- c) Predictive maintenance**
- d) Breakdown maintenance

13. Predictive maintenance is also called as _____

- a) Condition based maintenance**
- b) Breakdown maintenance
- c) Corrective maintenance
- d) Routine maintenance

14. Advantage(s) of predictive maintenance is / are ____

- a) Better quality**
- b) Increase process down time
- c) Both A & B
- d) None

15. What are the causes of failure of electrical machine _____

- a) Internal cause
- b) External cause
- c) **All of above**
- d) None

16. What are the types of fault developed _____

- a) Mechanical fault
- b) Electrical fault
- c) Magnetic fault
- d) **All of above**

17. Which of the following factors affecting life of transformer ____

- a) Moisture
- b) Temperature
- c) Soil impurities
- d) **All of above**

18. What are the different frequencies for different duty cycles

- a) Continuous working
- b) Intermittent working
- c) Very less period working
- d) **All of above**

19. Maintenance schedule for synchronous machines (alternators and motors)

- a) Daily, monthly, yearly
- b) **Monthly, 6 month, yearly**
- c) Weekly, monthly, yearly
- d) None

20. Effect of absence of maintenance or ignorance towards maintenance

- a) Cooling is not perfect
- b) Temperature rise
- c) Decrease efficiency
- d) **All of above**

Unit 3 – testing and maintenance of rotating machines

1. Method of measuring temperature of winding_____

- a) Thermometer method
- b) Resistance method
- c) Embedded temperature detector
- d) All of above**

2. Hopkinson's is also called as_____

- a) Regenerative test
- b) Back to back test
- c) Indirect test
- d) Both a & b**

3. Break test is also known as _____

- a) Indirect method of testing
- b) Direct method of testing**
- c) Regenerating method of testing
- d) All of above

4. Reduced voltage running up test is _____

- a) Routine test**
- b) Type test
- c) Special test
- d) None

5. 'Swinburne's test' is conducted on _____ DC machine.

- a) DC shunt machine**
- b) DC compound machine
- c) DC series machine
- d) None

6. The two machines are connected in Hopkinson's test ____

- a) Two machines are AC

- b) Two machines are DC
- c) **Two machines are identical**
- d) Two machines are same voltage

7. High voltage test is started by applying _____ of the test voltage a then voltage is increased to the full test voltage.

- a) $\frac{1}{4}$ the
- b) $\frac{1}{3}$ rd.
- c) **$\frac{1}{2}$ nd**
- d) $\frac{1}{5}$ the

8. Pull out torque test of three phase induction motor comes under _____

- a) Routine test
- b) **Type test**
- c) Special test
- d) None

9. Measurement of slip conducted under _____

- a) **Routine test**
- b) Type test
- c) Special test
- d) None

10. Earth tester is known as _____

- a) Megger
- b) **Modern megger**
- c) Insulation megger
- d) None

11. Non uniform air gap is a _____ fault

- a) **Magnetic fault**
- b) Mechanical fault
- c) Electrical fault
- d) Environmental fault

12. Function of ' filler gauge' tool is

- a) Fill the material in motor
- b) Find the short circuit
- c) **For checking air gap between stator and rotor**
- d) None

13. Necessary test to draw circle diagram of 3 phase induction motor is

- a) No load test
- b) Blocked rotor test
- c) **Both a and b**
- d) None

14. Sparking between commutator and brushed fault

- a) **Mechanical fault**

- b) Sparking fault
- c) Magnetic fault
- d) Electrical fault**

15. Function of spirit level indicator tool is

- a) To check the level of machine and foundation**
- b) To check voltage level
- c) To check shape of machine
- d) Both a and b

16. DC shunt machine are used for no load test because of _____

- a) Prizing characteristics
- b) Dropdown characteristics
- c) Self-protecting machine
- d) Both b & c**

17. Function of dial test tool is

- a) Checking shape
- b) Check alignment of shaft
- c) none
- d) All of above**

Unit 4 – testing and troubleshooting of transformer

1. In back to back test two transformers should be _____

- a) Same voltage
- b) Same size
- c) **Identical**
- d) All of above

2. Measurement of acoustic noise level test is a _____

- a) Routine test
- b) Type test
- c) **Special test**
- d) All of above

3. Back to back test on transformer is a _____

- a) **Supplementary test**
- b) Routine test
- c) Type test
- d) Routine test

4. In voltage ratio test on transformer test reading of voltmeter is _____

- a) Maximum
- b) Minimum
- c) **Zero**
- d) None

5. Turn testing method is suitable for _____

- a) **High voltage ratio transformer**
- b) Low voltage ratio transformer
- c) Medium voltage ratio transformer
- d) None

6. Polarity test is carried out on transformer for find out

- a) Additive polarity
- b) **Subtractive polarity**
- c) Only (a)

d) All of above

7. Low voltage DC supply and galvanometer are used in transformer testing

- a) **Phasing out test**
- b) Polarity test
- c) Voltage ratio test
- d) All of above

8. After conducting polarity test we can prefer _____ polarity.

- a) **Subtractive polarity**
- b) Additive polarity
- c) Only (a)
- d) None

9. To find “ magnetizing current ” we can use

- a) Short circuit test
- b) Voltage ratio test
- c) **Open circuit test**
- d) All of above

10. Sumner’s test (back to back test on transformer) is a

- a) Economical test
- b) Regenerative test
- c) Very useful test
- d) **All of above**

11. Temperature rise test and impulse voltage test are carried out on transformer under

- a) Routine test
- b) **Type test**
- c) Special test
- d) None

12. In troubleshooting of transformer “ silica gel ” colour is blue then

- a) **Don’t need to replacement**
- b) Need to replacement
- c) Destroyed
- d) None

13. Buchholz relay is use in transformer for find out

- a) External faults
- b) Magnetic faults
- c) Mechanical faults
- d) **Internal faults**

14. Humming noise is generated in transformer due to

- a) **Loose stamping and fitting**
- b) Overload

- c) Overheating
- d) All of above**

15. Rusting of transformer tank

- a) Oil might be having more acidity**
- b) Oil might be over heated
- c) Only b
- d) All of above**

Unit 5 - maintenance of electrical machine insulation

1. Class ' B ' insulating material operators on _____ temperature.

- a) 90 – degree C
- b) 130 – degree C**
- c) 105 – degree C
- d) 190 – degree C

2. Insulating material have

- a) All of above**
- b) Electrical properties
- c) Chemical properties
- d) Mechanical properties

3. Factors affecting life of insulating material

- a) All of above**
- b) Mechanical stresses
- c) Thermal stresses
- d) Electrical stresses

4. The insulation resistance -

- a) Decreases with temperature**
- b) Increases with temperature
- c) Remain constant with temperature
- d) None

5. The dielectric loss is

- a) Increase with temperature**
- b) Decrease with temperature
- c) Remain constant with temperature
- d) None

6. The insulation resistance is to be measured

- a) While machine is running
- b) Before starting machine
- c) Immediately after machine stop running**
- d) None

7. Method of purification and filtration of insulating oil is

- a) Centrifugal purifier
- b) Stream line filter

- c) Vacuum impregnation plant
- d) **Both a and c**

8. Reconditioning of insulated material is

- a) Cleaning of insulation
- b) Drying of insulation
- c) Revarnishing of insulation
- d) **All of above**

9. Following is not a property of transformer oil.

- a) It should not contain impurities
- b) Dielectric strength should be high
- c) Fire point is high
- d) **Acidity should be high**

10. Method of measurement of high insulation resistance is

- a) Voltmeter – ammeter method
- b) Substitution method
- c) **Megger**
- d) None

11. DAR is below 1.25 indicates

- a) **Poor insulation**
- b) Good insulation
- c) A and B
- d) None

12. Revarnishing of insulation method

- a) Air dry varnish by brush method
- b) Air dry varnish by spray method
- c) Hot dip method
- d) **All of above**

13. In dielectric strength test on transformer oil gap between two

- a) **2.5 mm**
- b) 2.2 mm
- c) 2.4 mm
- d) 2.8 mm

14. Testing of transformer oil is done by using

- a) Flash point test
- b) Crackle test
- c) Acidity test
- d) **All of above**

15. Class ‘ B ’ insulating material operators on _____ temperature.

- a) **180 – degree C**
- b) 130 – degree C
- c) 105 – degree C

d) 155 – degree C