NAME OF SUBJECT: EMERGING TRENDS IN MECHANICAL ENGINEERING
Subject Code: 22652

UNIT WISE MULTIPLE CHOICE QUESTIONS BANK
Program: Diploma in Mechanical Engineering
Program Code: - ME
Scheme: - I
Semester: - VI
Course: - Emerging Trend in Mechanical Engineering
Course Code: - 22652

01 – Recent Trend in Automobile Industry
Marks: -20

Content of Chapter:
1.1 Classify Hybrid Cars
1.2 List Different batteries used in E-Vehicles
1.3 Name different safety systems used in given vehicles

Chapter 1: Recent Trend in Automobile Industry

1. The electrolyte used in sodium nickel chloride batteries is
   a) Sodium chloride
   b) \textit{Tetra chloraluminite}
   c) Sodium bicarbonate
   d) Sodium glutamate
   Ans: - b

2. Average temperature of electrolyte in sodium nickel chloride batteries
   a) 100 to 200 degrees Celsius
   b) \textbf{270 to 350 degrees Celsius}
   c) 380 to 410 degrees Celsius
   d) None of the above
   Ans: - b

3. Average lifespan of sodium nickel chloride batteries
   a) 5 years
   b) 10 years
   c) \textbf{15 years}
   d) 20 years
   Ans: - c

4. Sodium nickel chloride batteries are also called as
   a) Horse
   b) \textbf{Zebra}
   c) Cobra
   d) Turbo
   e) Ans: - b
5. What are the various types of batteries used in electric vehicles
   a) Lithium-ion batteries
   b) Sodium nickel chloride batteries
   c) Sodium sulphur batteries
   d) All of the above
   Ans: - d

6. Sodium sulphur battery is a type of molten-salt battery constructed from…………………
sodium and sulphur.
   a) Solid
   b) Liquid
   c) Plasma
   d) Gases
   Ans: - b

7. The following is the operating temperatures of the sodium – sulphur battery.
   a) 400 to 600°C
   b) 1000 to 1500°C
   c) 300 to 350°C
   d) 100 to 200°C
   Ans: - c

8. The cell is usually in shape.
   a) Triangular
   b) Circular
   c) Rectangular
   d) Cylindrical
   Ans: - d

9. Entire cell is enclosed by a steel casing that is protected usually by…………… and…………….
   a) Nickel, chromium
   b) Chromium, molybdenum
   c) Aluminum, molybdenum
   d) Nickel, aluminum
   Ans: - b

10. Full form of BASE is.
    a) Basic Analysis and Security Engine.
    b) Biefield Academic Search Engine.
    c) Basel Agency for Sustainable Energy.
    d) Beta-Aluminium Solid Electrolyte.
    Ans: - d

11. The sulphur in sulphur sodium battery is absorbed by sponge.
    a) Sodium
    b) Carbon
    c) Wire
    d) Cellulose
    Ans: - b

12. Which of the following is not the name of charging station?
    a) Electric vehicle charging station
b) EVSE
  c) ECS
  d) ESSV
  Ans: - d

13. The charging time depends on which of the following factor?
   a) Battery size
   b) **Battery capacity**
   c) Size of vehicle
   d) Voltage of battery
  Ans: - b

14. The capacity of a battery is expressed in terms of
   a) Current rating
   b) Voltage rating
   c) **Ampere hour rating**
   d) None of the above
  Ans: - c

15. The storage battery generally used in electric power station is
   a) Nickel-cadmium battery
   b) Zinc carbon battery
   c) Lead-acid battery
   d) None of the above
  Ans: - c

16. Trickle charger of a storage battery helps to
   a) Maintain proper electrolyte level
   b) Increase its reverse capacity
   c) Prevent sulphation
   d) Keep it fresh and fully charged
  Ans: - d

17. On over charging a battery
   a) It will bring about chemical change in active materials
   b) It will increase the capacity of the battery
   c) It will raise the specific gravity of the electrolyte
   d) None of the above
  Ans: - d

18. Battery container should be acid resistance therefore it is made up of
   a) Glass
   b) Plastic
   c) Wood
   d) All of the above
  Ans: - d

19. Following will happen if battery charging rate is too high
   a) Excessive gassing will occur
   b) Temperature rise will occur
   c) Bulging and buckling of plates we occur
   d) All of the above
  Ans: - d
20. To prevent local action in battery, only .................. is used in electrolytes
   a) Pump water
   b) Distilled water
   c) Tap water
   d) Both A and C
   Ans: - b

21. Ampere hour capacity of an industrial battery is based on .................. hours discharge rate
   a) 8
   b) 12
   c) 16
   d) 24
   Ans: - a

22. The positive plates of nickel iron cell is made up of
   a) Nickel hydroxide
   b) Lead peroxide
   c) Ferrous hydroxide
   d) Potassium hydroxide
   Ans: - a

23. In lead acid accumulators, the container is filled with distilled water and concentrated sulphuric acid in the ratio of
   a. 1 : 2
   b. 2 : 1
   c. 3 : 1
   d. 1 : 3
   Ans: -b

24. The emf of the dry cell is about
   a) 0 V
   b) 0.5 V
   c) 1 V
   d) 1.5 V
   Ans: - d

25. In cell, the current flows in outer circuit from
   a) Positive terminal to negative terminal and electrons from negative terminal to positive terminal
   b) Positive terminal to negative terminal and electrons from positive terminal to negative terminal
   c) Negative terminal to positive terminal and electrons from negative terminal to positive terminal
   d) Negative terminal to positive terminal and electrons from positive terminal to negative terminal
   Ans: - a

26. Which of the following battery is used for aircraft?
   a) Lead acid battery
   b) Nickel-iron battery
   c) Dry cell battery
   d) Silver oxide battery
   Ans: - b

27. When two batteries are connected in parallel, it should be ensured that
a) They have same emf
b) They have same made
c) They have same ampere hour capacity
d) They have identical internal resistance

**Ans:** - a

28. The electrode for a battery must be
   a) A semi-conductor
   b) An insulator
   c) A good conductor of electricity
   d) A bad conductor of electricity

**Ans:** - c

29. A dead storage battery can be revived by
   a) Adding distilled water
   b) Adding so-called battery restorer
   c) A dose of H2SO4
   d) None of the above

**Ans:** - d

30. The open circuit voltage of any storage cell depends wholly upon
   a) Its chemical constituents
   b) On the strength of its electrolyte
   c) Its temperature
   d) All of the above

**Ans:** - d

31. Each cell has a vent cap
   a) To allow gases out when the cell is on charge
   b) To add water to the cell if needed
   c) To check the level of electrolyte
   d) To do all above functions

**Ans:** - d

32. What is one of the primary downsides of fuel cells?
   a) Weight
   b) Cost
   c) Pollution
   d) Maintenance

**Ans:** - b

33. A fuel cells converts .........energy into electrical energy
   a) Mechanical
   b) Magnetic
   c) Solar
   d) Chemical

**Ans:** - d

34. Which of the following primary cells has the highest voltage?
   a) Manganese-alkaline
   b) Carbon-zinc
c) Lithium

d) Mercury

Ans: - c

35. Which of these is problem electric car makers are trying to solve?
   a) Electric cars aren't noisy enough.
   b) They don't produce enough Sulphur dioxides.
   c) They don't cost enough.

Ans: - a

36. Identify incorrect statement of Electric vehicle
   a) Insufficient charging stations
   b) Long charging period
   c) Limited range
   d) High operating cost

Ans: - d

37. Which vehicle has the smallest number of principle components?
   a) Traditional vehicle
   b) Hybrid vehicle
   c) Electric vehicle
   d) Both A and B

Ans: - c

38. Which of the following vehicles produces zero emissions?
   a) Traditional
   b) Hybrid
   c) Electric
   d) Both A and B

Ans: - c

39. How to increase the range on electric vehicles?
   a) By increasing the battery capacity.
   b) By reducing battery capacity.
   c) By installing a turbocharger.
   d) By installing another DC motor.

Ans: - a

40. Inverter cell anode and cathode of the ...................... cell is used for vehicle
   a) Copper electrode zinc
   b) Zinc copper
   c) Aluminium zinc
   d) Nickel Cobalt

Ans: - a

41. The positive plants of nickel iron cell is made up of
   a) Nickel hydroxide
   b) Lead peroxide
   c) Ferrous hydroxide
   d) Potassium hydroxide

Ans: - a

42. A stable interface between solid.................... liquid........................ And......... gaseous promotes high rate of electrode processes.
a) Fuel, electrolyte, electrode
b) Electrode, fuel, electrolyte
c) Electrode, electrolyte, fuel
d) Fuel, electrode, electrolyte

**Ans:** - c

43. Which of the following is not an example of a fuel cell?
   a) Hydrogen-oxygen cell
   b) Methyl-oxygen-alcohol cell
   c) Propane-oxygen cell
   d) Hexanone-oxygen cell

   **Ans:** - d

44. The electrolytic solution used in a hydrogen-oxygen fuel cell is
   a) 75% KOH solution
   b) 25% KOH solution
   c) 75% NaOH solution
   d) 25% NaOH solution

   **Ans:** - b

45. The residual product discharged by the hydrogen-oxygen cell is
   a) Hydrogen peroxide
   b) Alcohol
   c) Water
   d) Potassium permanganate

   **Ans:** - c

1.1 Safety in Automobile

46. By what percentage do seatbelts reduce the risk of death for a person sitting in front seat?
   a) 50%
   b) 40%
   c) 60%
   d) 70%

   **Ans:** - b

47. Where do typical car seat belts apply most of the stopping force?
   a) To the shoulder and hips
   b) To the chest and abdomen
   c) **To the rib cage and pelvis**
   d) To the head and legs

   **Ans:** - c

48. What area of car is designed to deform in a collision?
   a) The crumple zone
   b) The interior
   c) The doors
   d) The rear end

   **Ans:** - a

49. What’s the primary advantage of a anti-lock braking system
   a) They allow you to stop easier
   b) They prevent locking
c) They allow you to steer while braking  
**Ans:** - c

50. Tempered safety glass is how many times stronger than regular glass  
a) 1 to 3 times stronger  
b) 5 to 10 times stronger  
c) 3 to 5 times stronger  
**Ans:** - b

51. By what percentage can airbags reduce the risk of dying in a direct frontal crash?  
a) 30%  
b) 40%  
c) 50%  
d) 60%  
**Ans:** - a

52. What kind of gas inflates in an airbag  
a) Hydrogen  
b) Oxygen  
c) Helium  
d) Nitrogen  
**Ans:** - d

53. How far behind the steering wheel should you sit to avoid injury from an inflated airbag?  
a) 8 inches  
b) 5 inches  
c) 10 inches  
d) 13 inches  
**Ans:** - c

54. What are the requirements for a child to sit in a forward facing child seat?  
a) He or she should weigh 10 to 15 pounds  
b) He or she should weigh 13 to 15 pounds  
c) He or she should weigh 15 to 18 pounds  
d) He or she should weigh 20 pounds or more  
**Ans:** - d

55. When is a child ready to use an adult seat belt?  
a) When they’re around 4 feet, 9 inches tall  
b) When they’re around 3 feet, 5 inches tall  
c) When they’re around 4 feet, 5 inches tall  
d) When they’re around 3 feet, 9 inches tall  
**Ans:** - a

56. What does airbag, used for safety of car driver, contain?  
a) Sodium bicarbonate  
b) Sodium azide  
c) Sodium nitrite  
d) Sodium peroxide  
**Ans:** - b

57. What year did the government mandate driver's side airbags?  
a) 1989
b) 1996
c) 2001
d) The government has never mandated it.
Ans: - d

58. Introduced laser ‘preview distance control’
   a) A Mitsubishi Diamante
   b) B BMW
   c) C Toyota
   d) D Mercedes
Ans: - b

59. If the impulse response in absolutely integrate then the system is
   a) Absolutely stable
   b) Unstable
   c) Linear
   d) Stable
Ans: - a

60. Asymptotic stability is connected with:
   a) A system under influence of input.
   b) A system not under influence of input.
   c) A system under influence of input.
   d) A system not under influence out.
Ans: - b

61. If root of the characteristics equation has positive real part system is
   a. Stable
   b. Unstable
   c. Marginally stable
   d. Linear
Ans: - a

62. ............... is a quantitative measure of how fair the transients die cut in the system.
   a) Absolutely stable
   b) Conditionally stable
   c) Unstable
   d) Relative stability
Ans: - d

63. A controller essentially is a
   a) Sensor
   b) Clipper
   c) Comparator
   d) Amplifier
Ans: - c

64. When brakes are applied on a moving vehicle the kinetic energy is converted to
   a) Mechanical energy
   b) Heat energy
   c) Electrical energy
   d) Potential energy
Ans: - b
65. The force required to stop a vehicle is dependent on
   a) The weight of vehicle
   b) The declaration rate
   c) Both A and B
   d) None of the above
   **Ans:** - c

66. Handbrake is applicable to
   a) Only front wheels
   b) Only rear wheels
   c) Both front and rear wheel.
   d) All of the above.
   **Ans:** - b

67. The power brake may be exerted by
   a) Electrical energy
   b) Engine vacuum
   c) Air pressure
   d) All of the above
   **Ans:** - a

68. First used in pedestrian air bags.
   a) Volvo v50
   b) Volvo v60
   c) Volvo v40.
   d) Volvo v70
   **Ans:** - c

69. Who invented air bags in Japan.
   a) Yasuzaburou kanka.
   b) Yasuzaburou kobori
   c) Varun Khatri.
   d) Saurabh zombie
   **Ans:** - b
### Question Bank for Multiple Choice Questions

<table>
<thead>
<tr>
<th>Program: Diploma in Mechanical Engineering</th>
<th>Program Code: - ME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheme: -I</td>
<td>Semester: - VI</td>
</tr>
<tr>
<td>Course: - Emerging Trend in Mechanical Engineering</td>
<td>Course Code: - 22652</td>
</tr>
</tbody>
</table>

### 02 – Process Engineering

**Marks: -10**

**Content of Chapter:**

1. Define process boiler
2. State principals of ultra-super critical boiler
3. Hyperbolic cooling tower
4. Waste heat recovery-process industry

**Marks: -10**

**Content of Chapter:**

1. When gas changes to liquid through the process of condensation, the temperature
   a. Increases.
   b. Decreases
   c. **Remains constant.**
   d. None of the mentioned
   **Ans:** - c

2. When vapour is cooled at constant total system volume, the.............. changes.
   a) Volume.
   b) **Pressure**
   c) Temperature.
   d) None of the mentioned
   **Ans:** - c

3. Which of the following boiler is best suited to meet the fluctuating demand of steam......?
   a) **A locomotive boiler.**
   b) C Cornish boiler
   c) D Babcock and wilcox boiler
   **Ans:** - a

4. Boiler efficiency is a measure of how effectively energy in fuel is converted into heat energy in steam going to the turbines
   a) **A Chemical energy**
   b) C Thermal energy
   d) All of the above
   **Ans:** - a

5. The water tubes in a simple vertical boiler are
   a. Horizontal
   b. **Vertical**
c. Inclined

d. All of the above

**Ans:** - c

6. The diameter of fine tubes in Cochran boiler is of order of
   a. 2cm
   b. 6cm
   c. 8cm
   d. 15cm

**Ans:** - b

7. The diameter of internal flue tubes of a Lancashire boiler is about……………… that of it’s shell
   a. One fourth
   b. One third
   c. Two fifth
   d. One half

**Ans:** - c

8. Thermal of well-maintained boiler will be of the order
   a. 30%
   b. 55%
   c. 90%
   d. 45%

**Ans:** - c

9. ........What is the temperature at which the steam boiler are………….Capable to withstand?
   a. 200°C
   b. 280°C
   c. 540°C
   d. 358°C

**Ans:** - c

10. Where are steam boilers used in the industries
    a) heating requirement for facility
    b) steam for batching
    c) steam for processing
    d) all of the above

**Ans:** - d

11. Which of the following is not a part of a boiler
    a) burner the combination
    b) chamber
    c) water reservoir
    d) None above

**Ans:** - c

12. The heat in the boiler is used for making
    a) steam
    b) condensing process
    c) ice
    d) none of these
13. How many cooling towers are there near a reactor
   a) 1
   b) 4
   c) 5
   d) 2
   **Ans:** - b

14. Cooling Towers vary from size of 40 metres to
   a) 400
   b) 120
   c) 450
   d) 560
   **Ans:** - a

15. What is the main component in a boiler
   a) **steam**
   b) heat
   c) pressure condenser
   d) combination
   **Ans:** - a

16. Which cooling Towers use a process similar to the one found in small evaporation active cooling units
   a) hyperbolic
   b) Tower
   c) condensate loop
   d) none of these
   **Ans:** - a

17. What is the reason to service a cooling tower?
   a) to ensure proper air flow
   b) to clean the tubes
   c) to inspect the water pump
   d) all of these
   **Ans:** - d

18. A is a type of heat exchange system where water is heated to its' boiling point via combustion of a fuel blown through a tube submerged in water.
   a) Condensate loop
   b) Hyperbolic cooling tower
   c) **Steam boiler**
   d) All of above
   **Ans:** - c

19. The heat produced in this system is then rejected into the system as
   a) Steam
   b) Boiler
   c) Both a & b
   d) None
   **Ans:** - a
20. A incorporates a firebox or furnace in order to burn the fuel. and heat.
   a) Boiler, generate
   b) Heat, boiler
   c) Steam, pressure
   d) None
   Ans: - a

21. A boiler is an enclosed vessel that provides a means for and heat to water until it becomes hot water or steam.
   a) Generate, boiler
   b) Condenser, loop
   c) Combustion, transfers
   d) All of above
   Ans: - c

22. Steam produced in a boiler can be used for a variety of purposes including space heating, drying and
   a) Sterilization
   b) Humidification
   c) Power generation
   d) All of above
   Ans: - d

23. The system includes anywhere that the steam condenses to form liquid water.
   a) Loop
   b) Power
   c) Liquid
   d) Condensate
   Ans: - d

24. The back pressure created by lift is approximately PSIG for every 2 feet of condensate lift.
   a) 1 PSIG
   b) 3PSIG
   c) 1PSGI
   d) 3PSGI
   Ans: - a

25. Condensate is the liquid formed when steam passes from the to the state.
   a) Vapor, solid
   b) Solid, liquid
   c) Vapor, liquid
   d) None
   Ans: - c

26. A incorporates a firebox or furnace in order to burn the fuel and generate heat.
   a) Steam
   b) Boiler
   c) Hydrogen
   d) None
27. The generated heat is transferred to water to make……………… the process of boiling.
   a) Steam
   b) Boiler
   c) Both
   d) None
   Ans: - b

28. Steam is regularly used for propulsion (as a driving force) in applications such as………………. turbines.
   a) Gas turbine
   b) Steam turbine
   c) Water turbine
   Ans: - b

29. Steam Boilers is used in………………. industries
   a) Heating Requirement for Facility.
   b) Steam for Batching.
   c) Steam for Processing.
   d) All of the above
   Ans: - d

30. Industrial boilers are closed vessels that use a fuel source or electricity to generate……….for industrial purposes.
   a) Fuel
   b) Food
   c) Steam
   Ans: - c

31. Basic Parts of a Boiler.
   a) Burner,
   b) the combustion chamber,
   c) the heat exchanger
   d) All of the above
   Ans: - d

32. Boiler water pH refers to a quantitative figure that expresses the acidity or alkalinity of boiler water. Ideally it should be between
   a) 8.5 to 9.5
   b) 7.5 to 8.5
   c) 9.5 to 10.5
   Ans: - a

33. Steam Properties and Qualities:
   a) they are capable of dividing and renewing themselves for long periods
   b) they are unspecialized
   c) they can give rise to specialized cell types.
   d) All of above
   Ans: - d

34. On mollier chart, free expansion or throttling process from high pressure to atmosphere is represented by
   a) Horizontal straight line
   b) Vertical straight line
   c) Straight inclined line
35. What is the function of boiler?
   a) To burn the fuel in a confined closed system with the supply of air
   b) To generate steam in varying pressure
   c) **To generate steam at constant pressure**
   d) To produce flue gases by burning fuel at a given pressure
   **Ans:** - c

36. What is the temperature at which the steam boiler are capable to withstand?
   a) 200°C
   b) 280°C
   c) **540°C**
   d) 358°C
   **Ans:** - c

37. What increase as steam pressure increase inside a boiler
   a) Force
   b) **Density**
   c) Rate of steam conversion
   d) Viscosity
   **Ans:** - b

38. In what is water in high pressure boiler circulated through?
   a) Conduits
   b) Cove
   c) Channel
   d) **Tubes**
   **Ans:** - d

39. Why single boiler unit per turbine is equipped commonly?
   a) **For better turbine control**
   b) To reduce the cost
   c) For overcoming losses of power
   d) To improve the efficiency
   **Ans:** - a

40. Cornish boiler is an example of which types of boilers?
   a) **Fire tube boiler**
   b) Water tube boiler
   c) Vertical tube boiler
   d) Extremally fired boiler
   **Ans:** - a

41. Which of these is a stationary boiler?
   a) Locomotive boiler
   b) Marine boiler
   c) Mobile boiler
   d) **Babcock Wilcox boiler**
   **Ans:** - d
42. What is the steam pressure limit of natural circulation Boiler?
   a) 650 bar  
b) **180 bar**  
c) 400 bar  
d) 550 bar  
**Ans:** - b

43. A device known as a…………….. is used to release condensate from the pipework whilst preventing the steam from escaping from the system.
   a) **Steam traps**  
b) Steam pipes  
c) Boiler nose  
d) Release valve  
**Ans:** - a

44. Which of these is a ‘fissile fuel’?
   a) Thorium  
b) Carbon  
c) Potassium  
d) **Graphite**  
**Ans:** - d

45. Condensation starts…………..point.
   a) **Dew point**  
b) Bubble point  
c) Triple point  
d) None of the mentioned  
**Ans:** - a

46. What kind of energy output is obtained from a ‘Steam Power Plant’?
   a) Heat energy  
b) Sound energy  
c) **Electricity**  
d) Thermal energy  
**Ans:** - c

47. Water that is fed back to the boiler by the pump is called?
   a) Absorber  
b) Absolute  
c) Compressor  
d) **Condensate**  
**Ans:** - d

48. Size of boiler tubes is specified by
   a) Mean diameter and thickness  
b) Inside diameter and thickness  
c) **Outside diameter and thickness**  
d) Outside diameter and inside diameter  
**Ans:** - c

49. Water tube boilers are those in which
49. Fire tube boilers are those in which
   a) Flue gases pass through tubes and water around it
   b) Water passes through the tubes and flue gases around it
   c) Work is done during adiabatic expansion
   d) Change is enthalpy
   Ans: - b

50. Locomotive boiler has
   a) 137 fire tubes and 44 superheated tubes
   b) 147 fire tubes and 34 superheated tubes
   c) 157 fire tubes and 24 superheated tubes
   d) 167 fire tubes and 14 superheated tubes
   Ans: - c

51. Cochran boiler is a………
   a) Horizontal fire tube boiler
   b) Horizontal water tube boiler
   c) Vertical water tube type
   d) Vertical fire tube type
   Ans: - d

52. Water tube boilers produces steam at a………………….pressure than that of fire tube boilers.
   a) Higher
   b) Lower
   c) Same
   d) None of the above
   Ans: - a

53. The draught in locomotive boilers is produced by a
   a) Chimney
   b) Centrifugal fan
   c) Steam jet
   d) All of the above
   Ans: - c

54. The draught may be produced by a
   a) Chimney
   b) Mechanical fan
   c) Steam jet
   d) All of the above
   Ans: - d

55. A steam and condensate system represents a……….. loop.
   a) Discontinuous
   b) Continuous
   c) None of the above
   d) All of the above
   Ans: - b
56. Once the condensate reaches the……….., it becomes available to the boiler for recycling.
   a) Condenser  
   b) Turbine  
   c) Boiler  
   d) Generator  
   Ans: - c

57. A boiler or steam generator is a device used to create steam by applying heat energy to .
   a) Water  
   b) Petrol  
   c) Oil  
   d) All of the above  
   Ans: - a

58. Which of the following is not a type of boiler?
   a) Fire tube boiler  
   b) Water tube boiler  
   c) Cast iron boiler  
   d) Hot water boiler  
   Ans: - d

59. Which of the following is the combustion accessory of a boiler?
   a) Fuel oil system  
   b) Gas system  
   c) Coal system  
   d) All of the above  
   Ans: - d

60. Find the wrong statement.
   a) Boiler is used to produce electricity in the energy business.  
   b) Boiler is used to produce steam for generating electricity.  
   c) Boiler can pressurize the water and can also evaporate it.  
   d) All are wrong.  
   Ans: - c

61. When the bubbles of steam are produced?
   a) Once the water reaches saturation temperature  
   b) Once the water starts evaporating  
   c) Once the temperature decreases  
   d) None of the above  
   Ans: - a

62. If steam is pressurized
   a) It occupies more space  
   b) It occupies less space  
   c) Both are correct  
   d) None of the above  
   Ans: - b
63. Combustion air positive shut-off shall be provided on all newly installed ________
   a) Grant boilers
   b) Process boilers
   c) Worcester boilers
   d) All of the above
   Ans: - b

64. Process boilers with capacity of 2.5 MMBtu/h and above are also referred as __
   a) Natural draft boilers
   b) Atmospheric boilers
   c) Both a. And b.
   d) None of the above
   Ans: - a

65. A flue damper and a vent damper are two examples of
   a) Combustion air positive shut off devices
   b) Combustion air negative shut off devices
   c) Both a. & b.
   d) None of the above
   Ans: - a

66. For process boilers, combustion air fans must meet the following requirements
   a) The fan motor shall be driven by a variable speed drive
   b) The fan motor shall include controls that limit the fan motor demand to no more than 30 %.
   c) Both a. & b.
   d) None of the above
   Ans: - c

67. Use of……………. is prohibited in process boilers.
   a) Use of a common gas
   b) combustion air control linkage
   c) jack shaft
   d) All of the above
   Ans: - d

68. Oxygen trim control strategy
   a) continuously measures the oxygen content in the flue gas
   b) adjusts the combustion air flow
   c) Continually tuning the air-fuel mixture.
   d) All of above
   Ans: - d

69. It is easy to detect and monitor excess air
   a) As oxygen not used for combustion is heated and discharged with the exhaust gases.
   b) Oxygen is discharged without heating
   c) Both a. & b.
   d) None of above
   Ans: - a

70. Detecting and monitoring carbon monoxide assures the air/fuel ratio is not too rich as
a) The excess air is trimmed  
b) Excess air is let out  
c) Both a. & b.  
d) None of above  

Ans: - a

71. Based on the exhaust gas analysis, a controller maintains stoichiometric combustion ___  
a) by commanding a servo motor to adjust the combustion air damper  
b) By commanding servo motor to adjust the fuel supply valve.  
c) Both a. & b.  
d) None of the above.  

Ans: - c

72. Combustion is the ideal air/fuel ratio where  
a) the mixing proportion is correct,  
b) the fuel is completely burned  
c) the oxygen is entirely consumed  
d) All of the above  

Ans: - d

73. Green coal, in order to be burnt, must be  
a) Heated sufficiently  
b) Burnt in excess air  
c) Heated to its ignition point  
d) Burnt as powder  

Ans: - c

74. A safety valve usually employed with stationary boilers is  
a) Lever safety valve  
b) Dead weight safety valve  
c) High steam and low water safety valve  
d) All of these  

Ans: - d

75. The relative heat absorption for successively added equal areas of boiler convection heating surfaces  
a) Increases  
b) Decreases  
c) Remain unaffected  
d) First increases and then decreases  

Ans: - b

76. The pressure of steam in the engine cylinder at the beginning of the stroke is..................... the boiler pressure.  
a) Equal to  
b) Less than  
c) Higher than  
d) None of these  

Ans: - b

77. Adiabatic process is
a) Essentially an isentropic process is
b) Non-heat transfer process
c) Reversible process
d) Constant temperature process

Ans: - b

78. Presence of moisture in fuel oil would
   a) Keep the burner tips cool
   b) Aid in proper combustion
   c) Because sputtering, possibly extinguishing flame
   d) Clean the nozzles

Ans: - d

79. In a steam condenser, the partial pressure of steam and air are 0.06 bar and 0.007 bar respectively. The condenser pressure is
   a) 0.007 bar
   b) 0.053 bar
   c) 0.06 bar
   d) 0.067 bar

Ans: - d

80. Find false statement about effect of sulphur in fuel?
   a) It has heating value
   b) It helps in electrostatic precipitation of ash in flue gases
   c) It leads to corrosion of air heaters, ducting, etc. if flue gas exit temperature is low
   d) It erodes furnace walls

Ans: - d

81. Which of the following option is incorrect about the sludges?
   a) Sludges are soft, loose and slimy precipitate
   b) Scale, sludges
   c) Sludges, rodent
   d) Scale, rodent

Ans: - a

82. If the precipitate formed is soft, loose and slimy, these are hard and adhering on the inner wall, it is called
   a) Sludges, scale
   b) Scale, sludges
   c) Sludges, rodent
   d) Scale, rodent

Ans: - a

83. Which of the following option is incorrect about the sludges?
   a) Sludges are soft, loose and slimy precipitate
   b) They are non-adherent deposits and can be easily removed
   c) Formed generally at heated portions of the boiler
   d) Can be removed by blow down operation

Ans: - c
84. The propulsion of water into steam drum by extremely rapid, almost explosive boiling of water at the heating surface is called
   a) Foaming
   b) Priming
   c) Corrosion
   d) Caustic embrittlement
   Ans: - b

85. The phenomenon during which the boiler material becomes brittle due to accumulation of caustic substances is known as
   a) Foaming
   b) Priming
   c) Corrosion
   d) Caustic embrittlement
   Ans: - d

86. Foaming is caused by the formation of
   a) Acids
   b) Alcohols
   c) Oils and alkalis
   d) Ketones
   Ans: - c

87. Boiler is a enclosed vessel that provides
   a) Expansion
   b) Ignition
   c) Combustion
   d) None of the above
   Ans: - c

88. High pressure boilers operate at
   a) Lower than 15 psig
   b) Higher than 15 psig
   c) 15 psig
   d) None of above
   Ans: - b

89. Boiler works from application of which type of energies
   a) Fuel combustion
   b) Electricity
   c) Nuclear energy
   d) All of above
   Ans: - d

90. Combustion of which fuels from following is source of heat for boiler
   a) Wood
   b) Coal
   c) Oil
   d) All of above
   Ans: - d

91. Boilers are used in places like
a) Domestic heating  
b) Commercial heating  
c) Industrial heating application  
d) All of above  
**Ans:** - d

92. Type of Lamont boiler is  
a) Forced circulation  
b) Natural circulation  
c) Over-through  
d) Positive forced circulation  
**Ans:** - a

93. What is called as the heart of the Lamont boiler?  
a) Water drum  
b) Centrifugal pump  
c) Furnace  
d) Blower  
**Ans:** - b

94. Through what is feed water from hot-well is passed through, before entering steam and water drum in Lamont boiler?  
a) Evaporator tubes  
b) Economizer  
c) Distributor header  
d) Circulating pump  
**Ans:** - b

95. In what form are the boiler tube arranging in Lamont boiler?  
a) Parallel in vertical  
b) Inclined vertically  
c) Parallel in horizontal  
d) Horizontally inclined  
**Ans:** - c

96. Through which does the even circulation of water is possible in Lamont boiler?  
a) Nozzles  
b) Water trough  
c) Feed pump  
d) Hose  
**Ans:** - a

97. What type of steam is generated by evaporator tube of Lamont boiler?  
a) Saturated steam  
b) Unsaturated steam  
c) Superheated steam  
d) Flash steam  
**Ans:** - a

98. Where is water steam separator drum located in Lamont boiler?  
a) Inside of the boiler  
b) Right above the furnace  
c) Before the feed water pump
d) Outside the boiler
Ans: - d

99. What is the main disadvantage of Lamont boiler?
   a) Less flexible in design
   b) Low heat transfer rate
   c) Formation of bubbles
   d) Low steam generation capacity
   Ans: - c

1.2 Introduction to ultra-supercritical boiler

100. A supercritical boiler is one that operates above the pressure and temperature of following values:
   a) 100 kg/cm² and 540°C
   b) 1 kg/cm² and 100°C
   c) 218 kg/cm² abs and 373°C
   d) 218 kg/cm² abs and 540°C
   Ans: - c

101. Steam is generated in a 
   a) Simple
   b) once through
   c) Superficial
   d) thrice through
   Ans: - c

102. Apart from feed heating, what should a plant have to obtain a gain in thermal efficiency?
   a) Lubrication
   b) Differential heating
   c) Reheating cycles
   d) Regenerative cycles
   Ans: - c

103. What is the critical point of steam generation in a “once through” boiler?
   a) 221.5 bar
   b) 221.4 bar
   c) 221.3 bar
   d) 221.2 bar
   Ans: - d

104. The input to the low-pressure feed water heater is from?
   a) Drain heater
   b) Drain cooler
   c) Drain pipe
   d) None of the mentioned
   Ans: - b

105. What type of boiler is a Benson boiler?
   a) Super critical boiler
   b) Fire tube boiler
   c) Natural circulation boiler
   d) Over-through boiler
Ans: - a

106. What is the capacity of Benson boiler?
   a) 180 tonnes/hr & above  
   b) 150 tonnes/hr & above  
   c) 250 tonnes/hr & above  
   d) 300 tonnes/hr & above  
Ans: - b

107. What is the major disadvantage of the Benson boilers?
   a) Boiler is big in size  
   b) Has large storage capacity  
   c) Deposition of salts  
   d) Bubble formation  
Ans: - c

108. The increment in thermal efficiency compared to the corresponding Subcritical cycle is gained at the expanse of?
   a) compactness of the plant  
   b) simplicity of the plant  
   c) complexity of the plant  
   d) expanse of the plant  
Ans: - c

109. The input to the low-pressure feedwater heater is from?
   a) Drain heater  
   b) Drain cooler  
   c) Drain pipe  
   d) None of the mentioned  
Ans: - b

110. Supercritical boiler generate to pressure.
   a) 22Mpa to 25Mpa  
   b) 28Mpa to 20Mpa  
   c) 23Mpa to 27Mpa  
   d) 25Mpa to 28Mpa  
Ans: - a
# Question Bank for Multiple Choice Questions

<table>
<thead>
<tr>
<th>Program: Diploma in Mechanical Engineering</th>
<th>Program Code: - ME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheme: -I</td>
<td>Semester: - VI</td>
</tr>
<tr>
<td>Course: - Emerging Trend in Mechanical Engineering</td>
<td>Course Code: - 22652</td>
</tr>
</tbody>
</table>

## 04 – Energy Audit and Management

** Marks: -10

**Content of Chapter:**

- 4.1 Standards and labeling standards (HVAC)
- 4.2 Energy Monitoring and Targeting
- 4.3 Energy management and audit

**1. Energy audit is a kind of scientific management method of …..**
   a) Energy
   b) Power
   c) Force
   d) Fuel

   **Ans:** - a

**2. Energy audit is conducted by……..**
   a) government
   b) Company
   c) Energy utilization unit
   d) Auditor

   **Ans:** - d

**3. Energy audit refers to the……..**
   a) Inspecting
   b) Examining
   c) Analyzing
   d) All of the above

   **Ans:** - d

**4. The targets of energy audit are….**
   a) Investigating problem
   b) Rectifying problem
   c) Analyzing problem
4. None of the above
Ans: - c

5. The ultimate aim of energy audit is to encourage enterprises to…….
   a) Save energy
   b) Reduce production cost
   c) Increase economic benefit
   d) All of the above
   Ans: - d

6. During an audit and expert examines the facility for….
   a) Energy leakage
   b) Reduction
   c) Energy conservation
   d) None of the above
   Ans: - c

7. Energy audit is an assessment of…….
   a) How much energy a facility consumes
   b) How much money of facility consumes?
   c) Cost of the facility
   d) Size of the facility
   Ans: - a

8. According to……………………energy audit means verification, monitoring, analysis of use of energy including submission of technical report containing recommendations for improving energy efficiency with cost benefit analysis and an action plan to reduce energy consumption.
   a) Energy conservation act 2001
   b) Industrial act 1946
   c) Factory act 1947
   d) none of act
   Ans: - d

9. Energy audit can also save you significant amount of money by……….
   a) Maximum energy efficiency
   b) Minimum energy efficiency
   c) None of the above
   d) All of the above
   Ans: - a

10. CFC stands for__________
    a) Chloro Fluro Carbons
    b) Carbon Fluorine Carbon
    c) Compact Fluro Carbons
    d) Concentric Fluro Carbons
    Answer: - A: Chloro Fluro Carbons

11. Which of the following is not greenhouse gas?
a) Carbon-dioxide
b) Methane
c) Nitrous oxide
d) **Hydrogen**

**Answer:** -D: Hydrogen

12. Overall efficiency of Gas turbine type cogeneration system is

a) 70 – 85
b) 60 – 80
c) **75-85**
d) 84-92

**Answer:** -A: 70 – 85

13. What is COP?

a) **Conference of Parties**
b) Coefficient of Pollution
c) Coalition of Parties
d) Convention of People

**Answer:** -A: Conference of Parties

14. Which technique takes care of time value of money in evaluation?

a) payback period
b) IRR
c) NPV
d) Both (b) & (c)

**Answer:** -D: Both (b) & (c)

15. Which country emits maximum CO₂?

a) Australia
b) Iceland
c) Norway
d) USA

**Answer:** -D: USA

16. Capillary wick is a part of

a) heat pump
b) heat wheel
c) **heat pipe**  
d) **regenerator**

**Answer: -C: heat pipe**

17. In a no-load test of a 3-phase induction motor, the measured power by the wattmeter consists of:

a) core loss  
b) copper loss  
c) core loss, windage & friction loss  
d) stator copper loss, iron loss, windage & friction loss

**Answer:-D: stator copper loss, iron loss, windage & friction loss**

18. The principles of energy management do not involve the following

a) Procure all the energy needed at the lowest possible price  
b) Manage energy use at highest energy efficiency  
c) Use the most appropriate technology  
d) **Release untreated hot flue gases to atmosphere**

**Answer:-D : Release untreated hot flue gases to atmosphere**

19. How energy conservation measures are classified?

a) Low cost – high return  
b) Medium cost – medium return  
c) High cost – high return  
d) **all the above**

**Answer:-D: all the above**

20. What is ESCO?

a) **Energy saving company**  
b) Energy sourcing company  
c) **Energy service company**  
d) Energy section of company

**Answer: -C: Energy service company**

21. For coal fired system, the flame length is influenced by

a) **Moisture**  
b) **volatile matter**  
c) ash content  
d) fixed carbon
Answer: -B: volatile matter

22. Sensitivity analysis is an assessment of ________________
   
   a) Profits   
   b) Losses   
   c) **Risk**   
   d) all

**Answer: -C : Risk**

23. If 30,000 kcal of heat is removed from a room every hour then the refrigeration tonnage will be nearly equal to

   a) 30 TR   
   b) 15 TR   
   c) **10 TR**   
   d) 100 TR

**Answer: -C: 10 TR**

24. Which one of the following is a high temperature heat recovery device?

   a) **Regenerator**   
   b) Heat pump   
   c) Heat wheel   
   d) Heat pipe

**Answer: -A: Regenerator**

25. The device used to upgrade a lower pressure steam to a higher-pressure steam is called

   a) heat pump   
   b) **thermo compressor**   
   c) heat pipe   
   d) heat wheel

**Answer: -B: thermo compressor**

26. What is the reduction in distribution loss if the current flowing through the distribution line is reduced by 10%?

   a) 0.1   
   b) 0.81   
   c) 0.19   
   d) None of the above
Answer: - C: 0.19

27. If the speed of a reciprocating pump is reduced by 50 %, the head
   a) is reduced by 25%
   b) is reduced by 50%
   c) is reduced by 75%
   d) remains same

Answer: - D: remains same

28. The strategy of adjusting and optimizing energy using systems and procedures so as to reduce
   energy requirements per unit of output while holding constant or reducing total cost of producing
   the output from the systems is ..............
   a) Energy Management
   b) Energy audit
   c) Energy utilization
   d) Energy wastage

Ans: - a

29. The fundamental goal of energy management is to ______
   a. Produce goods and provide services with least cost and least environmental effects
   b. Produce goods and provide services with more cost and more environmental effects
   c. Produce goods and provide services with No cost and no environmental effects
   d. All of the above

Ans: - a

30. Definition of energy management given by cape hart, turner and Kennedy is ______
   a. The Judicious and effective use of energy to maximize profits and enhance competitive position.
   b. The Judicious and effective use of energy to minimize profits and enhance competitive position.
   c. The systematic approach for decision making in area of energy management.
   d. All of the above

Ans: - a

31. The objective of energy management is ______
   a. To achieve and maintain optimum energy procurement and utilization throughout the organization
   b. To minimize the energy cost without affecting production and quality
   c. To minimize the environmental effects
   d. All of the above

Ans: - a

32. Energy savings is not the driving face when companies decide to purchase ______
   a. New equipment
b. New resources
c. New technologies
d. New low-tech materials
Ans: - d

33. The ultimate aim to encourage the enterprise to save the energy, reduce the production cost and increase economic benefits is ______
   A. Energy audit          C. Energy saving
   B. Energy management    D. Energy

34. Full form of BEE
   a. Bureau of energy efficient
   b. Basic electrical and electronics
   c. Basic thermal engineering
   d. None of the above.
   Ans: - a

35. BEE under the provisions of the act ___.
   A. 2000          C) 2001
   B. 2002          D) 1999
   Ans: - b

36. The standards and labeling scheme lunched in ___.
   A) may 2006    C) march 2006
   B) Feb 2005    D) June 2006
   Ans: - A

37. A star rating, ranging from ______ in the ascending order of energy efficiency.
   A) 1 to 4.          C) 1 to 5
   B) 1 to 6.          D) 1 to 10
   Ans: - C

38. The informative labels affixed ___.
   A) product.          C) equipment
   B) tool.             D) machine.
   Ans: - A

39. ______ has been formulated by Bureau of energy efficient.
   A) star labeling program.          B) computer program
   C) ranking program.                D) None of the above.
   Ans: - A

40. BEE is under of ministry of ___.
   A) health.          B) defense
   C) power.           D) all of the above.
   Ans: - C

41. HVAC stands for ______.
   A) heating, ventilation, air conditioning
   B) height, velocity, area
   C) all of the above.
D) None of the above.

Ans: - A
Question Bank for Multiple Choice Questions

<table>
<thead>
<tr>
<th>Program: Diploma in Mechanical Engineering</th>
<th>Program Code: - ME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheme: -I</td>
<td>Semester: - VI</td>
</tr>
<tr>
<td>Course: - Emerging Trend in Mechanical Engineering</td>
<td>Course Code: - 22652</td>
</tr>
</tbody>
</table>

05 – Agriculture equipment and Post-harvest Technology | Marks: -10 |
Content of Chapter: -
5.1 Tillers, sowing and Planting equipment, weeding machine, spraying machines, harvesting, post harvesting machineries
5.2 Elements of cold chain
5.3 Natural cooling action plan

1) Mechanized agriculture is the process of using agricultural machinery to…..
   a) Mechanize the work of agriculture
   b) Automate the work of agriculture
   c) Develop the work of agriculture
   d) none of the above
   Ans: - a

2) In modern times, ..................has replaced many farm jobs formally carried out by man.
   a) Trucks
   b) Powered machinery
   c) Electric cars
   d) None of the above.
   Ans: - b

3) Need of farm mechanization is.............
   a) to increase the productivity
   b) to reduce human effort in the farm
   c) Both A and B are correct
   d) none of the above
   Ans: - c

4) Mechanization in Indian agriculture started with............
   a) Land reclamation
   b) Development
   c) Central tractor organization
   d) none of the above
Ans: - c
5) The production of irrigation pumps and diesel engines started during…….
   a) 1950s
   b) 1930s
   c) 1940s
   d) 2000s
   Ans: - b

6) The production of tractors and power tillers started in …….
   a) 1950
   b) 1940
   c) 1960
   d) 2001
   Ans: - c

7) The following is not a farm machinery
   a) Combine harvester
   b) Power tiller
   c) Fresher
   d) Dumper trucks
   Ans: - c

8) Farm mechanization has helped in… ........ of agriculture from conventional to commercial crops
   a) Transformation
   b) Diversification
   c) Transport
   d) None of the above
   Ans: - b

9) there has been a rising trend in production and sale of farm machinery.
   a) From 1986 to 2000
   b) From 1920 to 2005
   c) From 1935 to 2000
   d) None of the above
   Ans: - a

10) The leading manufacturer of farm equipment or agriculture equipment it in India are
    a) Mahindra and Mahindra
    b) Sonalika
    c) Force
    d) All of the above
    Ans: - c

11) It is quite true that the farmers with low earnings per capita because of low per hectare they get fromholdings are......
    a) Indian farmers
    b) American farmers
    c) Australian farmers
    d) all of the above
    Ans: - a

12) Mechanization in India at various levels can be done in following ways…
    a) by introducing the improved agricultural implements on small scale holding to be operated by bullocks.
    b) by using small tractors, tractor drawn machines and power tillers on medium holdings to
supplementsource.
c) by using large scale tractor and machines on remaining holding to supplement animal power
source.
d) All of the above
Ans: - a

13) The step towards development of an appropriate agricultural technique in India is working
towards the motto of saving........
   a) labour       b) cost
   c) surplus labour       d) all of the above
Ans: - d

14) Indian agriculture is undergoing gradual shift from dependence on human power and
animal power to........
   a) mechanical power       b) solar power
   c) thermal power       d) all of the above
Ans: - a

15) The machinery which enables the farmers to raise a second crop or multi crop attractive and
way of life by becoming a commercial subsistence is....
   a) efficient machinery       b) agriculture machinery
   b) c) affective machinery       d) all of the above
Ans: - d

16) At present the farm power availability as per hectare is....
   a) 1.84KW/HA       c) 1.85KW/HA
   b) 2.04KW/HA       d) 2.06KW/HA
Ans: - a

17) Benefits of mechanization of agriculture is....
   a) it increases production       c) low cost of work
   b) it increases efficiency       d) all of the above
Ans: - d

18) Need of farm mechanization is to...
   a) for timely operations of agriculture activities
   b) to increase the production and productivity of food grains.
   c) efficient utilization of inputs, water and other natural resources.
   d) all of the above
Ans: - d

19) Advantages of mechanization is....
   a) substitute for labor.       c) amenity reasons
   b) attract or retain farm staff       d) all of the above
Ans: - d

20) Agriculture machinery can be divided into following groups they are....
   a) farm machinery       c) drain engineering
   b) irrigation engineering       d) all of the above
Ans: - a

21) Agricultural in India is________ characteristics.
   A) Important.       C) unique
   B) Base       D) None of the above.
Ans: - c
22) The extant of area under the command of draught animals is about__.
   A) 51%  
   B) 49%  
   C) 50%  
   D) 57%
   Ans: - d

23) The production of tractor is commenced during 1961-62, turning out__ them
   a) 880.  
   b) 860.  
   c) 540  
   d) 800
   Ans: - a

24) Mechanical and Electrical sources increased from____
   A) 40 to 83 %  
   B) 35 to 87 %  
   C) 30 to 93 %  
   D) None of the above.
   Ans: - a

25) The traditional processing equipment used by Farmers include____
   A) Supa.  
   B) Chakiya.  
   C) Chalni  
   D) All of the above.
   Ans: - D

26) Cocking need of villages are mostly met by the burning of____
   A) Biomass.  
   B) Crude oil.  
   C) Hydroelectric  
   D) Neutral gas.
   Ans: - A

27) Solar photovoltaic devices encouraged their use for water______
   A) Pumping.  
   B) Both A & C.  
   C) Lighting  
   D) None of the above.
   Ans: - B

28) Biomass is obtained For mixture of_____gas.
   A) Corban monoxide.  
   B) Both A & C.  
   C) Hydrogen.  
   D) None of the above.
   Ans: - B

29) Farmers also adopted sprinkler system for_____purpose.
   A) Commercial.  
   B) Industrial.  
   C) Domestic  
   D) All of the above.
   Ans: - D

30) A general-purpose or row-crop tractor is___machines
   A. Single use  
   B. Universal  
   C. Both A & B  
   D. None of Above
   Ans: - C

31) The most common use of the term "tractor" is for the vehicles used on____
   A. Farm  
   B. Production Industry  
   C. Medicinal Purpose  
   D. None of above
   Ans: - A

32) A_______is a track-type tractor with a blade attached in the front
   A. Car  
   B. Truck  
   C. Bulldozer  
   D. Buses
   Ans: - C

33) A compact utility tractor (CUT) is a_______version of an agricultural tractor
   a) Smaller  
   b) Larger  
   C. Medium  
   D. Extreme
   Ans: - C
34) The earliest tractors were called "_" tractors  
   a) Basic C. Common  
   b) Standard D. Moderate  
   Ans: - A

35) Space technology has been incorporated into agriculture in the form of_____ devices  
   A. ISP C. GST  
   B. GPS D. None of above  
   Ans: - A

36) Bulldozers are very powerful tractors and have excellent ground-hold  
   A. Design C. Ground Hold capacity  
   B. Rate D. Carrying capacity  
   Ans: - C

37) One example is that loader tractors were created by_____ the blade  
   A. Removing C. Both A & B  
   B. Adding D. None of Above  
   Ans: - A

38) The most common variation of the classic farm tractor is the______  
   A. HOE C. TOE  
   B. BOE D. None of Above  
   Ans: - B

39) Farm tractor hoe is also called as a________  
   A. Hoe remover C. Hoe weight loader  
   B. Hoe Loader D. Hoe Weight remover  
   Ans: - C

40) The most common type of equipment used in farms include balers, plows, mowers and______  
   A. Tractor. C. Car  
   B. Cycle. D. All of above  
   Ans: - A

41) The most common use of the term "tractor" is for the vehicles used on  
   a) Farm  
   b) Medicinal Purpose  
   c) Production Industry  
   d) None of above  
   Ans: - A

42) The primary benefit of the three-point hitch system is to transfer the________ and resistance  
   A. Arm. C. Volume  
   B. Body D. Weight  
   Ans: - D

43) One of the most common tasks on the farm is_______  
   A. Hitching C. Both A & B  
   B. Non hitching. D. None A & B  
   Ans: - A

44) _______ position in tractor is allows you to rest the bucket on the ground without down pressure or lift.
A. Boat.  C. Draft control
B. Float.  D. None of the above
Ans: - B

45) Power tiller is also known as the hand tractor or ________
A. Standing  C. Clearing
B. Walking type  D. Running type
Ans: - B

46) History indicates that the process of mechanization is dynamic with no ultimate ______
A. Goal  C. obtain
B. Design  D. Sign
Ans: - A

47) Each manufacture must improve his_______to maintain a profitable position
A. Reputation  C. Control
B. Product  D. Customer
Ans: - B

48) A tractor is an engineering vehicle specifically designed to deliver a high torque at______speeds
A. High  C. Slow
B. Extreme High  D. Medium
Ans: - C

49) The word tractor was taken from_____
A. French  B. Sanskrit
B. Latin  D. Japanese
Ans: - B

50) Tractors can be generally classified by number of____or wheels
A. Axles  C. Single Wheel
B. Double wheel  D. None of above
Ans: - A

51) Tillage is normally classified as.......................tillage.
A. Primary.  C) Primary or secondary
B. Secondary.  D) Tertiary
Ans: - C