Code: 50H15

MR 15

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)
(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)
Maisammaguda, Dhulapally, (Post via Kompally), Secunderabad-500 100.

IV B.TECH II SEMESTER
SUBJECT: <u>ENTREPRENEURSHIP SKILLS</u>
(BRANCH :Common to CSE,ECE,EEE,ME,CE,Mining)
Name of the faculty : P.RAJITHA,B.KIRAN KUMAR REDDY,ABHINAV SWAROOP,DR.G.PRAVEEN KUMAR(MBA DEPARTMENT)

_____

MODULE-I			
Q.No.	**Question**	**Bloom's Taxonomy Level**	**CO**
1.	Define entrepreneurship? What are the new trends you have noticed in entrepreneurship during 21 st century?	Remembering	1
	OR		
2.	Entrepreneurs can fail even if they are committed and have the characteristics needed to be successful. Why do you think this can happen?	Understanding	1
3.	Explain the evolution of entrepreneurship with suitable examples	Understanding	1
	OR		
4.	How can an organizational development be aided by having a good entrepreneurial mind set?	Remembering	1
5	Do you feel the service sector creates more job opportunities than the manufacturing sector — if yes, give reasons?	Creating	1
	OR		
6	List out the various barriers to entrepreneurship. Write some overcoming measures for such barriers.	Remembering	1
7	Discuss the various steps for setting up an enterprise.	Understanding	1
	OR		
8	Distinguish between entrepreneur and entrepreneurship?	Understanding	1

MODULE-II			
1.	What are the problems faced by Indian Women Entrepreneurs and what government support can they avail of?	Remembering	2
OR			
2.	As a potential entrepreneur, how would you construct a business plan to satisfy your banker?	Remembering	2
3.	Why do entrepreneurs need a strategy for success? Discuss an integrated corporate entrepreneurial strategy?	Remembering	2
OR			
4.	"Entrepreneurs are made not born". Comment and give reason for your views.	Understanding	2

Signature of Faculty   **Signature of HOD**

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)
IV B.Tech II Semester I Mid Question Bank 2018-19

Subject: Entrepreneurship Skills
Common: CSE,CE,ECE,EEE,Mech,Mining
Name of the faculty : P.RAJITHA,B.KIRAN KUMAR REDDY,ABHINAV SWAROOP,DR.G.PRAVEEN KUMAR(MBA DEPARTMENT)

1. SBIR stands for   [   ]
   a) Small business intelligent research   b) Small business inventory research
   c) Small business innovation research   d) Small business inventory research

2. Which statement is not true of entrepreneurs?   [   ]
   a) They take risks

   b) They apply innovative ideas.

   c) They change the way businesses convert inputs into outputs

   d) They generally stick to the processes already in use

3. The idea and actions that explain how a firm will make its profits refers to   [   ]
   a)Mission   b)Goal   c)Objective   d)Strategy

4. Entrepreneurial success has been significant because of the culture and political and economic system in_____   [   ]
   a) European countries   b)Asian countries   c)Middle east   d)Transition economies

5. A set of reasons for engaging in particular behaviour, especially human behaviour is known as[   ]
   a)Values   b)Vision   c)Mission   d)Motivation

6. Which of the following is not the characteristic that is helpful for an entrepreneur to have?   [   ]
   a)Self esteem   b)Optimism   c)Drive   d)Caution

7. Locus of control is
   a)A feeling   b)Attitude   c)Attribute   d)None of the above

8. Personal characteristic to be successful entrepreneur includes: [   ]
   a) Understanding environment
   b) Creating management options
   c) Encourage open discussion
   d) All the above

9. Money or property owned are used in business   [   ]
   a)Capitalism   b)Capital   c)Mentor   d)Wage

10. Which of the following is presented as evidence of social factors influencing whether someone becomes an owner-manager?   [   ]
    a) Self-employment is more common among single people than among the married
    b) Although people believe self-employment runs in families, there is little evidence to support this view
    c) There seems to be little relationship between self-employment and age.
    d) Self-employment is more common among some ethnic group

11. Full form of MUDRA   [   ]
    a) Macro units Development and refinance Agency
    b) Micro units Development and recommend Agency
    c) Micro units Development and refinance Agency
    d) None of the above

12. International entrepreneurship is   [   ]
    a)Licensing   b)Exporting   c)a&b   d)None of the above

13. _____ is what the "W" in the SWOT analysis stands for   [   ]
   a) Wedge   b)Work   c)Worth of business   d)Weakness

14. An entrepreneur's primary motivation for starting business is   [   ]
   a)To make money   b)To be independent   c)To be famous   d)To be powerful

15. To be successful in an entrepreneurial venture you need   [   ]
   a) Money   b)Luck   c)Hard work   d)Good idea

16. Entrepreneurs are best as   [   ]
   a) Managers   b)Venture capitalists   c)Planners   d)Doers

17. Entrepreneurs are   [   ]
   a) High risk takers   b)Moderate risk takers   c)Small risk takers   d)Doesn't matter

18. Entrepreneurs typically from
   a) Service business
   b) Manufacturing companies
   c) Constructive companies
   d) A variety of ventures

19. Female entrepreneurs normally start their venture at the age of _____years[   ]
   a)35-45   b)25-30   c)20-25   d)40-45

20. Male entrepreneurs normally start their venture at the age of _____years   [   ]
   a)35-45   b)25-35   c)20-25   d)40-45

21. In _____the death of entrepreneur results in the termination of venture   [   ]
   a)Limited company   b)Proprietorship   c)Limited partnership   d)Corporation

22. The term entrepreneur came from   [   ]
   a)French   b)Latin   c)English   d)UK

23. For the success of business plan the goals should be   [   ]
   a)Limitless   b)Imaginary   c)Specific   d)Generalized

24. An actor and a person who managed large project were termed as the entrepreneur in the___[   ]
   a)Earliest period   b)Middle ages   c)17th century   d)19th century

25. Which of the following is the most important for the entrepreneur, while starting a new
   venture, to make an assessment of?
   [   ]
   a)Risk   b)Profit   c)Market   d)competitors

26. Which one of the following is NOT an internal factor?   [   ]
   a) New technology b) Marketing   c) Manufacturing   d)Personnel

27. The Entrepreneur's _____ depends upon his/her perception of opportunity [   ]
   a) Commitment of opportunity   b) Commitment of resources
   c) Control of recourses   d) Strategic orientation

   28. _____ refers to what a person heard/apprehended when he/she was young [ ]
   a) Verbal programming   b) Modelling   c) Disassociation   d) None of the above

29. People who own, operate, and take risk of a business venture   [   ]
   a) Aptitude b) Employee   c) Entrepreneurs   d) Entrepreneurship

30. Which one is NOT a disadvantage of Entrepreneurship?   [   ]
   a) Risky   b) Uncertain Income   c) You are the boss   d) Work long hours

31. The Entrepreneur was distinguished from capital provider in _____   [   ]
   a) Middle ages   b) Early ages   c) 18th century   d) 20th century

32. The person who managed large projects was known as Entrepreneur in which   [   ]

   a) Middle ages   b) Early ages   c) 18th century   d) 20th century

33. Which of the following is alternatively called corporate venturing?   [   ]

   a) Entrepreneurship   b) Intrapreneurship

   c) Act of stating a new venture   d) Offering new products by an existing company

34. The activity which occurs when the new venture is started is called: [   ]

   a) Motivation   b) Business skills   c) Departure point   d) Goal orientation

35. Which one of the following is NOT one of the schools of thought under Macro view of entrepreneurship?   [   ]

   a) Environmental   b) Financial   c) Displacement   d) None of the above

36. An entrepreneur doing business within the national border is called: [   ]

  a) International entrepreneurship   b) Intrapreneurship

  c) Domestic entrepreneurship   d) None of the above

37. A firm with five or fewer employees, initial capitalization requirements of under $50,000, and the regular operational involvement of the owner   [   ]

   a) Mentor   b) Franchise   c) Service   d) Microenterprise

38. Business activities that avoid harm to the environment or help to protect it in some way is [ ]

   a) Free enterprise system   b) Entrepreneur

  c) Green Entrepreneurship   d) Social Entrepreneurship

39. A_____ is a for-profit enterprise with the dual goals of achieving profitability and attaining social returns   [   ]

  a) Social business   b) Green Entrepreneurship

 c) Entrepreneur   d) Social Entrepreneurship

40. Evaluation of your strengths and weaknesses   [   ]

   a) Self Assessment b) Employee   c) Entrepreneurship   d) Entrepreneur

41. Which one is NOT a disadvantage of Entrepreneurship?   [   ]

   a) Risky   b) Uncertain Income   c) You are the boss   d) Work long hours

42. What type of entrepreneurial business actually produces the products they sell? [   ]

  a) Manufacturing   b) Wholesaling   c) Retailing   d) Service

43. What type of entrepreneurial business sells products directly to the people who use or consume them?   [   ]

   a) Manufacturing   b) Wholesaling   c) Retailing   d) Service

44. Which one is NOT an advantage of Entrepreneurship?   [   ]

   a) Can choose a business of interest   b) You can be creative

   c) Make a lot of money   d) You will make decisions alone

45. The ability to learn a particular kind of job   [   ]

   a) Aptitude b) Employee   c) Entrepreneurship   d) Entrepreneur

46. Entrepreneurs who start a series of companies are known as: [   ]

   a) Macropreneurs   b) Intrapreneurs   c) Multipreneurs   d) None of the above

47. The opposite of "opportunity thinking" is: [   ]
   a) Obstacle thinking   b) Thought self-leadership.
   c) Self-efficiency   d) Adaptive response behavior.
48. The startups which rarely go public are called: [   ]
   a) Life style b) Foundation company c) Small company   d) High potential venture
49. Venture capital firms are usually organized as   [   ]
   a) Closed-end mutual funds   b) Limited partnerships
   c) Corporations   d) nonprofit businesses
50. The entrepreneur who is committed to the entrepreneurial effort because it makes good
business sense is classed as a/an_____   [   ]
   a) Inventor   b) Craftsman   c) Hacker   d) Opportunist
51 Today, inspired by the growth of companies such as Amazon.com, entrepreneurs are flocking
to the to start new businesses   [   ]
 a) Bookstore   b) Small Business Administration   c) Internet   d) None of the above
52. A group of companies or individuals that invests money in new or expanding businesses for
ownership and potential profits is known as   [   ]
 a) An equity financing firm   b) Franchising c) A venture capital firm   d) A corporation
53 .For Internet start-ups, one typical source of first funds is through   [ ]
 a) Angel financing   b) Government funds. C) Stock financing   d)   Community
development financing
54. Felix is an entrepreneur. At this stage of his company, his main concerns are do we have enough
        customers and money. What stage of growth is Felix's company in?   [   ]
   a) Survival   b) Start-up   c) Resource maturity   d) None of the above
55. The primary concerns when first3 starting your business are: [   ]
   a) Marketing and accounting   b) Planning and human resources
   c) Financing and marketing   d) Financing and planning
56. What are the primary sources of funding for entrepreneurs?   [   ]
        a) Personal savings and individual investors
        b) Finance companies and banks
        c) Small Business Administration and banks
        d) None of the above
57. Which one of the following is a barrier to new product creation and development? [   ]
        a) Trial and error   b) Opportunity cost   c) Opportunity parameter
        d) Intrapreneurship culture
58. Which one of the factors should be considered while assessing the location for business?
                                                                  [   ]
        a) Parking   b) Access from roadways to facility
        c) Delivery rates   d) All of the given options
59. Which one of the following is a sound strategic option for an entrepreneur when synergy is
        present?   [   ]
        a) Merger   b) Joint venture   c) Minority interest   d) Majority interest
60. The _____ plan shows whether the business is economically feasible or not. [   ]
   a) Financial   b) Business   c) Economic   d) None of the above
61. The point at which a venture is neither making profits nor losses is described by the term
                                                                  [   ]

a) Start-up   b) Buck-up   c) Cash strap   d) Break even

62. An entrepreneur's failure to adhere to sound business practices can be considered as [ ]
    a) Behaving unethically   b) Ignoring indigenous customs
    c) Not observing local regulations   d) None of the above

63. Every business venture starts with   [   ]
    a) Capital   b) An idea   c) A market   d) An opportunity

64. Which of the following is NOT a method of generating a venture idea   [   ]
    a) Training   b) Checklist   c) Notebook   d) Brainstorming

65. Which of the following is NOT a push force of motivation?   [   ]
    a) Security needs   b) Career advancement goals
    c) Attitude about the supervisor   d) Amount and timing of feedback

66. Which of the following is NOT an internal motivating force?   [   ]
    a) Goals   b) Feedback   c) Needs   d) None of the above

67. Which is one of the most important leadership qualities among managers and employees in the
    organization?   [ ]
    a) Entrepreneurship   b) Motivation c) Communication   d) Staffing

68. An individual's search for a new venture creation and the desire to sustain that venture is called
    _____   [ ]
    a) Entrepreneurial Communication   b) Entrepreneurial motivation
    c) Entrepreneurial skills   d) None of the above

69. If expected outcomes are _____ than achieved results, the entrepreneurs are motivated to
    continue the same behaviour   [ ]
    a) Less   b) More   c) Constant   d) None

70. Most of the successful entrepreneurs say that they are motivated by   [ ]
    a) Desire for money   b) Desire to make their vision come true
    c) Both A & B   d) None of the above

71. Who was the first lady governor of an Indian state?   []
    a) Miss padmaja Naidu   b) Mrs. Sarojini Naidu
    c) Mrs. Sucheta Kripalani   d) Mrs. Tarakeshwari Sinha

72. Who among the following is the world's first woman cosmonaut?   []
    a) Bachendri Pal b) Junko Tabeic) Valentine Tereshkova   d) Sally Ride

73. Who among the following was the first woman minister of a state   [   ]
    a) Vijayalakshmi Pandit   b) Sarojini Naidu
    c) Rajkumari Amrit Kaur   d) Indira Gandhi

74. MSMED stands to _____   [ ]
    a) Micro, Small & Medium Enterprises Development
    b) Mini, Small & Medium Enterprises Development
    c) Micro, Small & Medium Entrepreneurship Development
    d) Micro, Small & Medium Enterprises Department

75. _____ implies that women entrepreneurs are now economically independent and take
    decisions independently.   [ ]
    a)Better utilization of resources   b)Improved quality life
    c) Economic development   d)Employment generation

Signature of the faculty   **Signature of the HOD**

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

B.Tech–ECE- VIII Sem (MR 15-2016-17 Admitted Students)
I Mid Examination Subjective Question Bank

Subject: Embedded Systems Design   **Branch: EEE**
Subject Code: 50499
Name of the faculty: Mr N Srikanth Prasad

Instructions:

1. All the questions carry equal marks

2. Solve all the questions

MODULE I

Q.No	Question	Bloom's Taxonomy Level	CO
1.	What is an embedded system? Explain the different applications of embedded systems	Understanding	1
OR			
2.	Explain the various purposes of embedded systems in detail with illustrative examples.	Understanding	1
3.	Explain the different classifications of embedded systems. Give an example for each	Understanding	1
OR			
4.	Differentiate between general purpose computers & embedded systems	Understanding	1
5.	Explain the role of embedded systems in automotive domain.	Evaluating	1
OR			
6.	Explain major levels of abstraction in the design process with example.	Evaluating	1
7.	List the quality attribute in the embedded system development context? Expalin different quality attributes to be considered in embedded system design.	Analyzing	1

	OR		
8.	Explain the different characteristics of embedded systems in detail.	Analyzing	1

MODULE II

Q.No.	Question	Bloom's Taxonomy Level	CO
1.	What is the difference between microprocessor and microcontroller? Explain the role of microprocessors and controllers in embedded system design?	Analyzing	2
	OR		
2.	What is the difference between RISC and CISC processors? Give an example for each	Analyzing	2
3.	Differentiate between Harvard and Von-Neumann architecture.	Analyzing	2
	OR		
4.	What are the different types of memories used in Embedded System Design? Explain the role of each.	Analyzing	2
5.	Explain the different on-board communication interfaces in brief.	Understanding	2
	OR		
6.	Explain the different external communication interfaces in brief.	Understanding	2
7.	Define Sensor and Actuator? Explain its role in Embedded System Design? Illustrate with examples	Understanding	2
	OR		
8.	Differentiate between SRAM and DRAM cell.	Understanding	2

MODULE III

Q.No.	Question	Bloom's Taxonomy Level	CO
1.	What is Embedded Firmware? What are the different approaches available for Embedded Firmware development?	Understanding	3

	OR		
2.	Explain the role of Reset circuit and Brown-out Protection Circuit in Embedded System.	Understanding	3
3.	Explain the role of Real Time Clock (RTC) in Embedded System.	Applying	3
	OR		
4.	Explain the role of Watchdog Timer in Embedded System.	Applying	3

Signature of the Faculty   **Signature of HOD**

Subject: Embedded Systems Design   **Branch: EEE**
Subject Code: 50499
Name of the faculty: Mr N Srikanth Prasad

1. Embedded systems are   [   ]
    a) General purpose   b) Special purpose   c) all   d) None

2. Embedded systems is   [   ]
    a) An electronic system   b) A pure mechanical system
    c) An electro-mechanical system   d) (a) or (c)

3. Which of the following is not true about embedded systems?   [   ]
    a) Built around specialized hardware   b) Always contain an operating system
    c) Execution behavior may be deterministic   d) All of these   e) None of these

4. Which of the following is not an example of a 'Small-Scale Embedded System'?[ ]
    a) Electronic Barbie doll   b) Simple calculator
    c) Cell phone   d) Electronic toy car

5. The first recognisedmodern embedded system is   [   ]
    a) Apple Computer   b) Apollo Guidance Computer (AGC)
    c) Calculator   d) Radio Navigation System

6. The first mass produced embedded system is   [   ]
    a) Minuteman-I   b) Minuteman-II
    c) Autonetics D-17   d) Apollo Guidance Computer (AGC)

7. Which of the following is (are) an intended purpose(s) of embedded system?
    a) Data Collection   b) Data processing   c) Data communication
    d) All of these   e) None of these

8. Which of the following is an (are) example(s) of embedded systems?   [   ]
    a) USB Mass storage device   b) Network router   c) Digital camera
    d) Music player e) All of these   f) None of these

9. A digital multi meter is an example of an embedded system for   [   ]
    a) Data communication   b) Monitoring   c) Control
    d) All of these   f) None of these

10. Which of the following is an (are) example(s) of an embedded system for signal processing?[ ]
    a) Apple iPOD (media player device)   b) SanDisk USB mass storage device
    c) Both (a) and (b)   d) None of these

11. Embedded systems are application and domain specific. State True or False   [   ]
    a) True   b) False

12. Which of the following is true about Embedded Systems?   [   ]
    a) Reactive and Real Time   b) Distributed   c) Operates in harsh environment
    d) All of these   e) None of these

13. Which of the following is a distributed embedded system?   [   ]
    a) Cell phone   b) Notebook Computer c) SCADA system
    d) All of these   e) None of these

14. Quality attributes of an embedded system are   [   ]
    a) Functional requirements   b) Non-functional requirements
    c) Both   d) None of these
15. Response is a measure of   [   ]
    a) Quickness of the system   b) How fast the system tracks changes in Input
    c) Both   d) None of these
16. Throughput of an embedded system is a measure of   [   ]
    a) The efficiency of the system   b) The output over a stated period of time
    c) Both   d) None of these
17. Benchmark is   [   ]
    a) A reference point   b) A Set of performance criteria c) Both   d) None
18. Mean Time Between Failures (MTBF) and Mean Time To Repair (MTTR) defines the reliability
    of an embedded system. State True or False.   [   ]
    a) True   b) False
19. MTBF gives the frequency of failures of an embedded system. State True or False[ ]
    a) True   b) False
20. Which of the following is true about the quality attribute 'maintainability'?   [ ]
    a) The corrective maintainability requirement for a highly reliable embedded system is very less
    b) Availability of an embedded system is directly related to the maintainability of the system
    c) Both   d) None
21. Mean Time Between Failures (MTBF) for an embedded product is very high. This means:[ ]
    a) The product is highly reliable b) The availability of the product is very high
    c) The preventive maintenance requirement for the product is very less
    d) All of these   e) None of these
22. Mean Time Between Failures (MTBF) of an embedded product is 4 months and the Mean Time
    To Repair (MTTR) of the product is 2 weeks. What is the availability of the product?[   ]
    a) 100%   b) 50%   c) 89% d) 10%
23. Which of the following are the three measures of information security in embedded systems?[   ]
    a) Confidentiality, secrecy, integrity   b) Confidentiality, integrity, availability
    c) Confidentiality, transparency, availability   d) Integrity, transparency, availability
24. You are working on a mission critical embedded system development project for a client and the
    client and your company has signed a Non-Disclosure Agreement (NDA) on the disclosure of the
    project-related information. You share the details of the project you are working with your friend.
    Which aspect of Information security you are violating here?
    a) Integrity   b) Confidentiality   c) Availability   d) None
25. Which of the following is an example of 'gradual' safety threat from an embedded system?[ ]
    a) Product blast due to overheating of the battery
    b) UV emission from the embedded product   c) Both   d) None
26. Non-operational quality attributes are   [   ]
    a) Non-functional requirement   b) Functional requirements
    b) Quality attributes for an offline product   d) (a) and (c)   e) None
27. Which of the following is (are) an operational quality attribute?   [   ]
    a) Testability   b) Safety   c) Debug-ability   d) Portability   e) All
28. Which of the following is (are) non-operational quality attribute?   [   ]
    a) Reliability   b) Safety   c) Maintainability   d) Portability   e) All f) None
29. In the Information security context, Confidentiality deals with the protection of data and
    application from unauthorized disclosure. State True or False   [   ]
    a) True   b) False
30. What are the two different aspects of debug-ability in the embedded system development
    context?   [   ]
    a) Hardware & Firmware debug-ability b) Firmware & Software debug-ability

c) None

31. For an embedded system, the quality attribute 'Evolvability' refers to   [   ]
    a) The upgradability of the product   b) The modifiability of the product
    c) Both   d) None
32. Portability is a measure of 'system independence'. Sate True or False   [   ]
    a) True   b) False
33. For a commercial embedded product the unit cost is high during   [   ]
    a) Product launching   b) Product maturity   c) Product growth
    d) Product discontinuing
34. For a commercial embedded product the sales volume is high during   [   ]
    a) Product launching   b) Product maturity   c) Product growth
    d) Product discontinuing
35. The protocol require for networking two CPU process are   [   ]
    a) TCP   b) IP   c) UDP d) All of the above
36. Buffer overrun is the condition in   [   ]
    a) Producer-consumer   b) Deadlock
    c) Dining philosophers   d) Priority inversion
37. Hold and wait condition is present in   [   ]
    a) Racing   b) Deadlock   c) Dining philosophers d) Priority inversion
38. For Embedded system to get high response the latency should be   [   ]
    a) Maximum   b) Minimum   c) Equal   d) None of the above
39. COST is a _____requriment for selection of RTOS   [   ]
    a) Functional   b) Non functional   c) Both a & b   d) None
40. _____memory to hold Operating system files   [   ]
    a) NVROM   b) EEPROM   c) PROM   d) FLASH
41. OS requires _____memory to hold OS files   [   ]
    a) Non volatile memory b) Volatile memory   c) Both a& b   d) None
42. The RTC chip contains a micro chip for holding _____related information of system in the absence of power
    a) Time b) Date   c) Both a& b   d) none
43. The _____ unit of these Embedded system responsible for generating precise for the processor   [   ]
    a) Power   b) Reset   c) oscillatory   d) Brownout protection
44. Brown out protection circuit prevents the_____ from unexpected program execution[   ]
    a) output   b) Input   c) processor/controller   d) none
45. Which one of the following offers CPUs as integrated memory or peripheral interfaces?
    a) Microcontroller   b) Microprocessor   c) Embedded system   d) Memory system
46. Which of the following offers external chips for memory and peripheral interface circuits?[ ]
    a) Microcontroller   b) Microprocessor   c) Embedded system   d) Memory system
47. Which of the following is a 4-bit architecture?   [   ]
    a) MC6800   b) 8086   c) 80386   d) National COP series
48. What is CISC?   [   ]
    a) Computing instruction set complex   b) Complex instruction set computing
    c) Complimentary instruction set computing   d) Complex instruction set complementary
49. How is the protection and security for an embedded system made?   [   ]
    a)OTP   b)IPR   c) Memory disk security   d) Security chips
50. Which of the following possesses a CISC architecture?   [   ]
    a) MC68020   b) ARC   c) Atmel AVR   d) Blackfin
51. Which of the following is a RISC architecture?   [   ]
    a) 80286   b) MIPS   c) Zilog Z80   d) 80386
52. Which one of the following is board based system?   [   ]

a) Data bus   b) Address bus   c) VMEbus   d) DMA bus

53. VME bus stands for   [   ]
   a) Versa module Europa bus   b) Versa module embedded bus
   c) Vertical module embedded bus   d) Vertical module Europa bus

54. It retains its content when power is removed. What type of memory is this?[   ]
   a) Volatile memory   b) Nonvolatile memory   c)RAM   d)SRAM

55. Name a volatile memory.   [   ]
   a) RAM   b) EPROM   c) ROM   d) EEPROM

56. Name a nonvolatile memory.   [   ]
   a) ROM   b) RAM   c) SRAM   d) DRAM

57. The initial routine is often referred to as [   ]
   a) Initial program   b) Bootstrap program
   c) Final program   d) Initial embedded program

58. What kind of socket does an external EPROM to plugged in for prototyping?[   ]
   a) Piggyback   b) Single socket   c) Multi-socket   d) Piggyback reset socket

59. Which one of the following is UV erasable?   [   ]
   a) Flash memory   b) SRAM   c) EPROM   d) DRAM

60. What kind of memory does an OTP have?   [   ]
   a) SRAM   b) RAM   c) EPROM   d) DRAM

61. Which type of memory is suitable for low volume production of embedded systems?
   a) ROM   b) Volatile   c) Non-volatile   d) RAM

62. Which is the single device capable of providing prototyping support for a range of microcontroller?   [   ]
   a) ROM   b) Umbrella device   c) OTP   d) RAM

63. What type of memory is suitable for high volume production?   [   ]
   a) RAM   b) ROM   c) EPROM   d) EEPROM

64. What type of memory is suitable for medium volume production?   [   ]
   a) Umbrella devices   b) OTP   c) ROM   d) RAM

65. How an embedded system communicate with the outside world? [   ]
   a) Peripherals   b) Memory   c) Input   d) Output

66. How the input terminals are associated with external environments?   [   ]
   a) Actuators   b) Sensors   c) Inputs   d) Outputs

67. Which of the following are external pins whose logic state can be controlled by the processor to either be a logic zero or logic one is known as   [   ]
   a) Analogue value   b) Display values
   c) Binary values   d) Time derived digital outputs

68. What kind of visual panel is used for seven segmented display? [   ]
   a) LED   b) LCD   c) Binary output   d) Analogue output

69. What is 80/20 rule?   [   ]
   a) 80% instruction is generated and 20% instruction is executed
   b) 80% instruction is executed and 20% instruction is generated
   c) 80%instruction is executed and 20% instruction is not executed
   d) 80% instruction is generated and 20% instructions are not generated

70. Which of the architecture is more complex?   [   ]
   a) SPARC   b) MC68030   c) MC68030   d) 8086

71. Which is the first company who defined RISC architecture?[   ]
   a) Intel   b) IBM   c) Motorola   d) MIPS

72. Which of the following processors execute its instruction in a single cycle?[   ]
   a) 8086   b) 8088   c) 8087   d) MIPS R2000

73. How is memory accessed in RISC architecture? [   ]
    a) load and store instruction   b) opcode instruction
    c) memory instruction   d) bus instruction
74. Which of the following has a Harvard architecture?   [   ]
    a) EDSAC   b) SSEM   c) PIC   d) CSIRAC
75. Which of the following statements are true for von Neumann architecture?   [   ]
    a) shared bus between the program memory and data memory
    b) separate bus between the program memory and data memory
    c) external bus for program memory and data memory
    d) external bus for data memory only
76. Princeton architecture is also known as   [   ]
    a) von Neumann architecture   b) Harvard   c) RISCd) CISC
77. What are the factors of filters which are determined by the speed of the operation in a digital
    signal processor?   [   ]
    a) attenuation constant   b) frequency   c) bandwidth   d) phase
78. How many tables does an FIR function of a digital signal processor possess?   [   ]
    a) 1   b) 2   c) 3   d) 4
79. Why is said that branch prediction is not applicable in a digital signal processor?[   ]
    a) low bandwidth   b) high bandwidth   c) low frequency   d) high frequency
80. Which architecture in digital signal processor reduces the execution time?   [   ]
    a) Harvard   b) CISC   c) program storage   d) von Neumann
81. What does AAU stand for?   [   ]
    a) arithmetic address unit   b) address arithmetic unit
    c) address access unit   d) arithmetic access unit
82. Which is the most basic non-volatile memory?   [   ]
    a) Flash memory   b) PROM   c) EPROM   d) ROM
83. Who has invented flash memory?   [   ]
    a) Dr.FujioMasuoka   b) John Ellis   c) Josh Fisher   d) John Ruttenberg
84. Which of the following is serial access memory?[   ]
    a) RAM   b) Flash memory   c) Shifters   d) ROM
85. Which is the early form of non-volatile memory?   [   ]
    a) magnetic core memory   b) ferrimagnetic memory
    c) anti-magnetic memory   d) anti-ferromagnetic
86. How many main signals are used with memory chips?   [   ]
    a) 2   b) 4   c) 6   d) 8
87. Which are the two main types of processor connection to the motherboard?   [   ]
    a) sockets and slots   b) sockets and pins
    c) slots and pins   d) pins and ports
88. Which of the following has programmable hardware?   [   ]
    a) microcontroller   b) microprocessor   c) coprocessor   d) FPGA
89. Which of the following is the pin efficient method of communicating between other devices?
    a) serial port   b) parallel port   c) peripheral port   d) memory port
90. Which of the following depends the number of bits that are transferred?   [   ]
    a) wait statement   b) ready statement   c) time   d) counter
91. Which of the following is the most commonly used buffer in the serial porting? [   ]
    a) LIFO   b) FIFO   c) FILO   d) LILO
92. What does SPI stand for?   [   ]
    a) serial parallel interface   b) serial peripheral interface
    c) sequential peripheral interface   d) sequential port interface
93. Which allows the full duplex synchronous communication between the master and the slave?
    a) SPI   b) serial port   c) I2C   d) parallel port

94. Which of the following processor uses SPI for interfacing?   [   ]
    a) 8086   b) 8253   c) 8254   d) MC68HC11
95. In which register does the data is written in the master device?   [   ]
    a) index register b) accumulator c) SPDR   d) status register
96. What happens when 8 bits are transferred in the SPI?   [   ]
    a) wait statement   b) ready statement   c) interrupt   d) remains unchanged
97. Which signal is used to select the slave in the serial peripheral interfacing? [   ]
    a) slave select   b) master select   c) interrupt   d) clock signal
98. How much time period is necessary for the slave to receive the interrupt and transfer the data?
    a) 4 clock time period   b) 8 clock time period
    c) 16 clock time period   d) 24 clock time period
99. What does I2C stand for?   [   ]
    a) inter-IC   b) intra-IC   c) individual integrated chip   d) intel IC
100. Which of the following is the most known simple interface?   [   ]
    a) I2C   b) Serial port   c) Parallel port   d) SPI
101. Which are the two lines used in the I2C?   [   ]
    a) SDA and SPDR   b) SPDR and SCL
    c) SDA and SCL   d) SCL and status line
102. Which of the following are the three hardware signals?   [   ]
    a) START, STOP, ACKNOWLEDGE   b) STOP, TERMINATE, END
    c) START, SCL, SDA   d) STOP, SCL, SDA
103. Which of the following performs the START signal?   [   ]
    a) master   b) slave c) CPU   d) memory
104. A packet is also referred to as   [   ]
    a) postcard   b) telegram   c) letter d) data
105. Which of the following byte performs the slave selection?   [   ]
    a) first byte   b) second byte   c) terminal byte   d) eighth byte
106. How can both single byte and the double byte address slave use the same bus?   [   ]
    a) extended memory   b) extended address
    c) peripheral count   d) slave bus
107. Which of the following uses two data transfers?   [   ]
    a) auto-incrementing counter   b) auto-decrementing counter
    c) combined format   d) single format
108. Which can determine the timeout value?   [   ]
    a) polling   b) timer c) combined format   d) watchdog timer
109. Which type of storage element of SRAM is very fast in accessing data but consumes lots of power?   [   ]
    a) TTL   b) CMOS   c) NAND   d) NOR
110. What is approximate data access time of SRAM?   [   ]
    a) 4ns   b) 10ns   c) 2ns   d) 60ns
111. Which of the following is an SRAM?   [   ]
    a) 1T-RAM   b) PROM   c) EEPROM   d) EPROM
112. Which one of the following is a storage element in SRAM?   [   ]
    a) capacitor   b) inductor   c) transistor   d) resistor
113. Which is the storage element in DRAM?   [   ]
    a) inductor   b) capacitor   c) resistor   d) mosfet
114. Which of the following is more volatile? [   ]
    a) SRAM   b) DRAM   c) ROM   d) RAM
115. What is the size of a trench capacitor in DRAM?   [   ]
    a) 1 Mb   b) 4-256 Mb   c) 8-128 Mb   d) 64-128 Mb

116. What does VRAM stand for?   [   ]
    a) video RAM   b) verilog RAM c) virtual RAM d) volatile RAM
117. Which mode of the Intel timer 8253 provides a software watchdog timer? [   ]
    a) rate generator   b) hardware triggered strobe
    c) square wave rate generator   d) software triggered strobe
118. Which processors use fast interrupts?   [   ]
    a) DSP processor   b) RISC processor
    c) CISC processor   d) Harvard processor
119. What is the disadvantage of the fast interrupts?   [   ]
    a) stack frame   b) delay   c) size of routine   d) low speed
120. Which of the following forces a standard service routine?   [   ]
    a) READY interrupt   b) IRQA interrupt   c) NMI   d) software interrupt
121. RTC chips use _____ to compute time, date when the power is off.   [   ]
    a) ac supply   b) generators   c) rectifiers   d) battery
122. RTC is used for _____   [   ]
    a) conversion   b) communication
    c) real time and clock measurement   d) memory management
123. FPGA means   [   ]
    a) Field Programmable Gate Array   b) Forward Programmable Gate Array
    c) Forward Parallel Gate Array   d) Field Parallel Gate Array
124. Little Endian Processor means   [ ]
    a)Store the lower order byte of the data at the lowest address and the higher order byte of
    the data at the highest address memory
    b) Store the higher-order byte of the data at the lowest address and the lower order-byte ofthe data
    at the highest address of memory
    c) Store both higher order and lower order byte of the data at the same address of memory
    d) Store both higher order and lower byte of the data at the higher address of memory
    e) Store both higher order and lower byte of the data at the lower address of memory
125. Watch dog timer is a hard ware timer for   [   ]
    a) Holding the time   b) Monitoring the firmware execution
    c) Both a& b   d) none

Signature of the Faculty   **Signature of HOD**

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)
Department of Electrical and Electronics Engineering
IV B.Tech. II Sem (MR 15 Regulations, 2016-2017 Admitted Batch)
I Mid Examination Subjective Question Bank

Subject:50342 -Renewable Energy Sources   **Branch : EEE**

Name of the faculty: Mr.Ch. Narendra Kumar

Q. No.	Question	Bloom's Taxonomy Level	CO
1.	Explain about classification of energy resources	Understanding	1
	OR		
2.	Explain about the solar radiation geometry	Understanding	1
3.	Calculate the number of day light hours at Bangalore on 21 June and 21 December in a leap year. The latitude of Bangalore is 12º 58'	Applying	1
	OR		
4.	Explain about the advantages and limitations of renewable energy sources.	Understanding	1
5.	Explain about pyrheliometers.	Understanding	1
	OR		
6.	Derive the expression for solar radiation on titled surface.	Applying	1
7.	Calculate the sun's altitude angle and Azimuth angle at 7:30 am solar time on August 1 for a location at 400N latitude.	Applying	1
	OR		
8.	Explain about solar radiation data	Understanding	1
	Module II		

1.	Explain flat plate collector with neat sketch	Understanding	2
	OR		
2.	Classify focusing types of collectors with neat sketches	Understanding	2
3.	Explain the advantages and disadvantages of concentrating collectors over flat plate collectors	Understanding	2
	OR		
4.	Explain about the principle of operation and description of non convective solar pond	Understanding	2
5.	Illustrate advantages and disadvantages of photovoltaic solar energy conversion.	Understanding	2
	OR		
6.	Explain with neat sketches about solar water heating	Understanding	2
7.	With a neat sketch explain about solar distillation	Understanding	2
	OR		
8.	Explain design principle and constructional details of a Box type solar cooker	Understanding	2
	Module III		
1.	Explain with neat sketch the working of a wind energy system with main components	Understanding	3
	OR		
2.	Explain about Horizontal Axis Windmills with neat sketches	Understanding	3

3.	Explain the advantages and disadvantages of horizontal and vertical axis wind mills	Understanding	3
	OR		
4.	Explain the advantages and disadvantages of horizontal and vertical axis wind mills	Understanding	3
5.	Determine the wind mill rotor diameter to operate a centrifugal pump, which will have a discharge of 40000 litres/day with a total head of 10m. The pump operates for 10 hours in a day. The rated speed of wind is 6 m/s. The power coefficient is 0.3. Density of air is 1.2 kg/m3. Assume transmission efficiency 95%, pump efficiency as 35%.	Applying	3
	OR		
6.	Derive the expression for power in wind mill	Applying	3

Signature of the Faculty   **Signature of the HoD**

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)
IV B.Tech II Sem (MR15 Regulations-2016-2017 Admitted Batch)
Subject: 50342 - RENEWABLE ENERGY SOURCES
Branch: EEE   **Name of the Faculty: Mr.Ch. Narendra**

Kumar

MULTIPLE CHOICE QUESTIONS
MODULE I

1 The predominant source of energy on earth is   [   ]
   a. Electricity
   b. Natural Gas
   c. The Sun
   d. Plants
2 In what form can solar energy be used?   [   ]
   a. Thermal energy
   b. Electrical energy
   c. Mechanical Energy
   d. All of above
3 Solar energy travels through space by the process of   [   ]
   a. Conduction
   b. Convection
   c. Radiation
   d. Transportation
4 The value of solar constant is approximately   [   ]
   a. 6.5 kW/m^2
   b. 1.36 kW/m^2
   c. 3.64 kW/m^2
   d. 10 kW/m^2
5 Pyranometer is an instrument used for measuring the   [   ]
   a. Temperature of solar photovoltaic cell
   b. Solar irradiance of a solar photovoltaic cell
   c. Wind speed of a solar photovoltaic cell
   d. Efficiency of a solar photovoltaic cell
6 A pyrheliometer is an instrument used to measure the   [   ]
   a. Temperature of solar photovoltaic cell
   b. Intensity of direct solar radiation at normal incidence
   c. Intensity of indirect solar radiation
   d. Efficiency of a solar photovoltaic cell
7 The term beam solar radiation is related to   [   ]
   a. Small hydropower
   b. Flat plate solar collector
   c. Turbine
   d. Coal extraction mechanism

8 Sunlight light reaches the earth through   [   ]
   a. Direct radiation

    b. Diffuse radiation
    c. Scattered radiation
    d. All of above

9   Solar radiation that is received after it changes its direction due to reflection and scattering in the atmosphere is called   [   ]
    a. Diffused radiation
    b. Scattered radiation
    c. Beam radiation
    d. Radiation

10   Solar radiation that has not been absorbed or scattered and reaches the earth surface directly is called   [   ]
    a. Beam radiation
    b. Scattered radiation
    c. Diffused radiation
    d. Radiation

11   The total solar radiation received at any point on the earth's surface is termed as   [   ]
    a. Insulation
    b. Insolation
    c. Radiation
    d. Insulated radiation

12   **The power from the sun intercepted by the earth is approximately**   [   ]
    a. 1.8×10^8 MW
    b. 1.8×10^{11} MW
    c. 1.8×10^{14} MW
    d. 1.8×10^{17} MW

13   **The extraterrestrial radiation flux varies by _____ % over a year.**   [   ]
    a. ± 1.1
    b. ± 2.2
    c. ± 3.3
    d. ± 4.4

14   **Absorption of Solar radiations at earth's surface occur due to presence of**   [   ]
    a. Ozone
    b. Water vapours
    c. Carbon di-oxide
    d. All of the above

15   **The zenith angle is the angle made by the sun's rays with the _____ to a _____ surface.**   [   ]
    a. normal, horizontal
    b. tangent, horizontal
    c. normal, vertical
    d. tangent, vertical

16   **Solar radiation flux is usually measured with the help of a**   [   ]
    a. Anemometer
    b. Pyranometer

c. Sunshine recorder

d. All of the above

17 **The angle made by the plane surface with the horizontal is known as**   [   ]

a. Latitude

b. Slope

c. Surface azimuth angle

d. Declination

18 **The angle made in the horizontal plane between the horizontal line due south and the projection of the normal to the surface on the horizontal plane is**   [   ]

a. Hour angle

b. Declination

c. Surface azimuth angle

d. Solar altitude angle

19 Surface azimuth angle varies from   [   ]

a. 0 to 90°

b. -90 to 90°

c. 0 to 180°

d. -180° to 180°

20 **The hour angle is equivalent to**   [   ]

a. 10° per hour

b. 15° per hour

c. 20° per hour

d. 25° per hour

21 **The complement of zenith angle is**   [   ]

a. Solar altitude angle

b. Surface azimuth angle

c. Solar azimuth angle

d. Slope

22 **The correction has a magnitude of ___ minutes for every degree difference in longitude**   [   ]

a. 2

b. 4

c. 6

d. 8

23 **The global radiation reaching a horizontal surface on the earth is given by**   [   ]

a. Hourly beam radiation + Hourly diffuse radiation

b. Hourly beam radiation – Hourly diffuse radiation

c. Hourly beam radiation / Hourly diffuse radiation

d. Hourly diffuse radiation / Hourly beam radiation

24 **The ratio of the beam radiation flux falling on a tilted surface to that falling on a horizontal surface is called the**   [   ]

a. Radiation shape factor

b. Tilt factor

c. Slope

d. None of the above

25 The sun subtends an angle of _____ minutes at the earth's surface. [   ]
   a. 22
   b. 32
   c. 42
   d. 52

26 The value of Solar Constant is [   ]
   a. 1347 W/m^2
   b. 1357 W/m^2
   c. 1367 W/m^2
   d. 1377 W/m^2

27 **Solar radiation received on the earth surface lies within the range of** [   ]
   a. 0.2-0.4 microns
   b. 0.38-0.78 microns
   c. 0-0.38 microns
   d. None of these

28 **Insolation is referred to as** [   ]
   a. Direct radiation received at any time
   b. Diffuse radiation received at any time
   c. Total radiation received per unit time per unit area
   d. None of these

29 What is angle of declination on 305th day of year and what day is it? [   ]
   a. -23.26^o, November 2
   b. -15.06^o, November 1
   c. -18.96^o, November 2
   d. -10.52^o, November 1

30 The time from sunrise to sunset is termed as _____ [   ]
   a. Slope
   b. Day length
   c. Local solar time
   d. Solar intensity

31 LST stands for _____ [   ]
   a. Local standard time
   b. Local solar temperature
   c. Low surface temperature
   d. Land surface temperature

32 What is the angle of declination on May 12 considering it's a leap year? [   ]
   a. 20.34 ^{o}
   b. 22.85 ^{o}
   c. 29.42 ^{o}
   d. 12.4 ^{o}

33 Most of the data on solar radiation received on the surface of the earth are measured by [   ]
   a. Solarimeter
   b. Pyranometer
   c. Pyheliometer

d. Sunshine recorder

34 Which of the following energy has the greatest potential among all the sources of renewable energy?   [   ]
    a. Solar energy
    b. Wind Energy
    c. Thermal energy
    d. Hydro-electrical energy

35   In what form is solar energy is radiated from the sun?   [   ]
    a. Ultraviolet Radiation
    b. Infrared radiation
    c. Electromagnetic waves
    d. Transverse waves

36 Units for solar radiations _____   [   ]
    a. $cal/cm^2/day$
    b. cal/mtrs
    c. langleys
    d. both A&B

37 The duration of bright sunshine in a day is measured by means of a _____   [   ]

    a. Sunshine recorder
    b. Solarimeter
    c. Pyranometer
    d. Pyrheliometer

38 What is 'n' in the following solar intensity formula?   [   ]
    $I = I_{sc} \{1 + 0.033\cos(360n/365)\}$
    a. Day of the year
    b. Month of the year
    c. The year
    d. Week of the year

39 When the sun is directly on the top of head, it as referred to _____   [   ]
    a. Zenith
    b. Azimuth
    c. Declination
    d. Hour angle

40 Radiation intensity 'I' normal to the surface is given by _____   [   ]
    a. $I\cos\theta$
    b. $I\tan\theta$
    c. $I\cot\theta$
    d. $I\sin\theta$

41 By which of the following symbol is solar Declination denoted   [   ]
    a. δ
    b. ρ
    c. Δ
    d. γ

42 **The following is (are) laws of black body radiation.**   [   ]
    a. Plank's law

b. Stefan-Boltzmann law
c. both (A) and (B)
d. None of the above
43 **Which of these factors are responsible for variation in Insolation?**   [   ]
a. The angle of inclination of the sun's rays
b. The length of the day
c. The transparency of the atmosphere
d. All of the above
44 The annual average daily diffuse radiation received over the whole country is   [   ]
around
a. 100 langleys
b. 150 langleys
c. 175 langleys
d. 200 langleys
45 The annual average daily global radiation received over the whole country is   [   ]
around
a. 250 langleys
b. 350 langleys
c. 450langleys
d. 550langleys
46 Peak value of solar radiation generally measure in april or may with parts of   [   ]
_____ over 600 langleys
a. Rajasthan
b. Gujarat
c. Rajasthan & Gujarat
d. None of the above
47 Solar radiation incident outside the earth's atmosphere is called   [   ]
a. extraterrestrial radiation.
b. Terrestrial radiation
c. Incidence radiation
d. None of the above
48 is a term used to describe infrared radiation emitted from the atmosphere   [   ]
a. terrestrial radiation
b. extraterrestrial radiation.
c. Incidence radiation
d. None of the above
49 A shadow from a vertical stick at noon is longer than on any other day during   [   ]
the
a. winter solstice
b. spring equinox
c. summer solstice
d. fall equinox
50 Earth's North Pole is not pointing toward the Sun or away from the Sun   [   ]
during
a. winter solstice
b. spring equinox

c. summer solstice
d. lunar first quarter

MODULE II

51 **Direct Solar energy is used for**   [   ]
   a. Water heating
   b. Distillation
   c. Drying
   d. All of the above

52 A liquid flat plate collector is usually held tilted in a fixed position, facing   [   ]
   _____ if located in the northern hemisphere.
   a. North
   b. South
   c. East
   d. West

53 The collection efficiency of Flat plate collector can be improved by   [   ]
   a. putting a selective coating on the plate
   b. evacuating the space above the absorber plate
   c. both (A) and (B)
   d. None of the above

54 The efficiency of various types of collectors _____ with _____   [   ]
   temperature.
   a. increases, decreasing
   b. decreases, increasing
   c. remains same, increasing
   d. depends upon type of collector

55 Maximum efficiency is obtained in   [   ]
   a. Flat plate collector
   b. Evacuated tube collector
   c. Line focussing collector
   d. Paraboloid dish collector

56 The following type of energy is stored as latent heat   [   ]
   a. Thermal energy
   b. Chemical energy
   c. Electrical energy
   d. Mechanical energy

57 Which of the following type of collector is used for low temperature systems?   [   ]
   a. Flat plate collector
   b. Line focussing parabolic collector
   c. Paraboloid dish collector
   d. All of the above

58 In the paraboloid dish concept, the concentrator tracks the sun by rotating   [   ]
   about
   a. One axes
   b. Two axes
   c. Three axes

d. None of the above
59 Which type of dryer can be used to dry fruits and vegetables using renewable   [   ]
    energy?
  a. Solar dryer
  b. Oil furnace
  c. Coal furnace
  d. Wood-based furnace
60 Solar photovoltaic cell converts solar energy directly into   [   ]
  a. Mechanical energy
  b. Electricity
  c. Heat energy
  d. Transportation
61 What does SPV stand for with respect to solar energy?   [   ]
  a. Solar photovoltaic
  b. Solid platevoltaic
  c. Solar platevoids
  d. None of the above
62 _____is a glazing which limits the radiation and convection heat losses   [   ]
  a. Absorber plate
  b. Selective surface
  c.   Insulation
  d. Transparent cover
63 .To how many types are flat plate collectors divided depending on type of   [   ]
    heat transfer fluid?
  a. 2
  b. 3
  c. 4
  d. 5
64   What are provided to minimize heat loss?   [   ]
  a. Absorber plate
  b. Surface plate
  c.   Insulation
  d. Casing
65 Which part of flat plate collectors is coated in black?   [   ]
  a. Transparent cover
  b. Absorber plate
  c. Insulation
  d. Fins
66 In which collector does air flow without any obstruction?   [   ]
  a. Porous absorber plate
  b. Non-porous absorber plate
  c. Over lapped glass absorber
  d. Finned absorber
67   In which absorber matrix material is arranged and the back absorber plate is   [   ]
    eliminated?
  a. Porous absorber plate

    b.   Non-porous absorber plate
    c.   Over lapped glass absorber
    d.   Finned absorber

68   The function of a solar collector is to convert.......   [   ]
    a.   Solar Energy into Electricity
    b.   Solar Energy radiation
    c.   Solar Energy thermal energy
    d.   Solar Energy mechanical energy

69   Reflecting mirrors used for exploiting solar energy are called........   [   ]
    a.   Mantle
    b.   Ponds
    c.   Diffusers
    d.   Heliostats

70   Flat plate collector absorbs _____   [   ]
    a.   Direct radiation only
    b.   Diffuse radiation only
    c.   Direct and diffuse both
    d.   All of the above

71   Most widely used solar material is _____   [   ]
    a.   Arsenic
    b.   Cadmium
    c.   Silicon
    d.   steel

72   Photovoltaic cell or solar cell converts _____   [   ]
    a.   Thermal energy into electricity
    b.   Electromagnetic radiation directly into electricity
    c.   Solar radiation into thermal energy
    d.   Solar radiation into kinetic energy

73   Temperature attained by a flat-plate collector is of the _____-   [   ]
    a.   Order of about 90^0C
    b.   Range of 100^0C to 150^0C
    c.   Above 150^0C
    d.   None of the above

74   The voltage of a single solar cell is _____   [   ]
    a.   0.2 v
    b.   0.5 v
    c.   1.0 v
    d.   2.0 v

75   Photovoltaic cell are made up of   [   ]
    a.   Conductor material
    b.   Semi conductor material
    c.   Insulators
    d.   All of the above

76   Temperature attained by cylindrical parabolic collector is of the order of   [   ]
    a.   50 – 100 °C
    b.   100 – 150 °C

c. 150 – 200 °C
d. 200 – 300 °C

77   Who discovered the photovoltaic effect   [   ]
a. American Physicist Enrico Fermi
b. Italian Physicist Alessandro Volta
c. German Physicist Heinrich Rudolf Hertz
d. French Physicist Edmond Becquerel

78   The sun tracking is needed in the case of   [   ]
a. Flat plate collector
b. Cylindrical parabolic and paraboloid
c. Both of them
d. None of these

79   A solar pond is a combination of which of the following combinations?   [   ]
a. Solar energy collection & heat storage
b. Solar energy storage & heat collection
c. Solar energy collection & energy storage
d. None of the above

80   What material does a solar pond contain?   [   ]
a. Salt
b. Sugar
c. Stone
d. Lime

81   The cylindrical Parabolic collector is oriented with the focal axis pointed in   [   ]
      the
a. East –West direction
b. North –South direction
c. East –West direction & North –South direction
d. None of the above

82   The amount of photo generated current increases slightly with increase in   [   ]
a. Temperature
b. Photons
c. Diode current
d. Shunt current

83   _____ photo voltaic devices in the form of thin films.   [   ]
a. Cadmium Telluroide
b. Cadmium oxide
c. Cadmium sulphide
d. Cadmium sulphate

84   Which of the following is NOT utilized in the process of harnessing solar   [   ]
      energy?
a. Gas
b. Mirror
c. Steam
d. Photovoltaic cell

85   The absorber located at focus of Point Focusing Collector is made of   [   ]
a. Copper-steel

b. Aluminium-copper
c. Zirconium-copper
d. . None of the above

86 Pebble bed storage is the _____ type of solar energy storage [ ]
   a. Mechanical
   b. Electrical
   c. Chemical
   d. Thermal

87 Concentration ratio is high in case of _____ collectors [ ]
   a. Flate plate collector
   b. Parabolic collectors
   c. Mirror strip collector
   d. None of the above

88 Combination of solar cells (Photo-voltaic cells) designed to increase the [ ]
   electric power
   output is called a _____.
   a. Solar cell
   b. Solar module
   c. Solar array
   d. Both B & C

89 Thermal energy from solar pond is used to drive a _____heat engine [ ]
   a. Carnot cycle
   b. Joule cycle
   c. Atkinson cycle
   d. Rankine cycle

90 Fresnel lens collector is _____type of collectors [ ]
   a. Line focusing
   b. Point focusing
   c. Flat plate collector
   d. None

91 The refrigeration techniques used for solar cooling is [ ]
   a. Vapour Compression
   b. Absorption
   c. Both a & b
   d. None

92 CPC reflectors can be designed for _____ absorber shapes [ ]
   a. Flat one sided absorber
   b. Flat two sided absorber(fin)
   c. Wedge-like absorber
   d. All the above

93 _____ involves a material that undergoes no change in phase over [ ]
   the temperature domain encountered in the storage process
   a. Sensible heat storage
   b. Latent heat storage
   c. Packed bed storage
   d. Water storage

94   Central receiver system uses _____ of flat tracking mirror scaled   [   ]
        heliostats to reflect the solar energy to central receiver mounted on tower.
    a. 1-10
    b. 10-100
    c. 100-10000
    d. None of the above
95   Applications of Solar air heaters   [   ]
    a. Heating buildings
    b. Drying agricultural produce and lumber.
    c. Heating green houses.
    d. All of the above
96   The factors influencing the electrical design of the solar array   [   ]
    a. The sun intensity
    b. The sun angle
    c. The operating temperature
    d. All of the above
97   Solar water heating systems that use an _____ as a antifreeze solution   [   ]
        to heat-transfer fluid have effective freeze protection as long as the
        proper antifreeze concentration is maintained.
    a. propylene glycol
    b. ethylene glycol
    c. propylene glycol & ethylene glycol
    d. None of the above
98   First solar cell was invented by   [   ]
    a. George Fritts
    b. Jefferson Fritts
    c. Charles Fritts
    d. Fornster Fritts
99   Which of the following solar cookers is the most efficient and has the shortest [   ]
        cooking time?
    a. Box cooker
    b. Parabolic cooker
    c. Panel cooker
    d. Cardboard type cooker
100   _____technique are used for distillation   [   ]
    a. Flash Distillation
    b.   Vapor Compression Process
    c. Solar Distillation
    d. All the above

MODULE III

101   What kind of energy does a wind turbine use?   [   ]
    a. Kinetic energy
    b. Potential energy
    c. Chemical Energy
    d. Thermal energy

102   Which of the following states in India ranks first in the installation of wind   [   ]
       power?
  a.   Gujarat
  b.   Andhra Pradesh
  c.   Maharashtra
  d.   Tamil Nadu
103   Horizontal axis windmills of modern design can   [   ]
  a.   Always turn towards the direction of the wind
  b.   Never adjust the energy output
  c.   Never turn towards the direction of the wind
  d.   None of the above
104   The maximum energy conversion efficiency of a wind turbine for a given   [   ]
       swept area is
  a.   25.1%
  b.   50.4%
  c.   59.3%
  d.   99.9%
105   If the velocity of wind is doubled, then the power output will increase by   [   ]
  a.   10 times
  b.   8 times
  c.   2 times
  d.   6 times
106   The term Darrious&Savonius rotor are related to   [   ]
  a.   Small hydropower
  b.   Wind energy
  c.   Turbine
  d.   Coal extraction mechanism
107   Power output from a wind energy electric generator is directly proportional to   [   ]
  a.   wind velocity
  b.   Square of wind velocity
  c.   Cube of wind velocity
  d.   Square root of wind velocity
108   Another name for a windmill is   [   ]
  a.   Wind farm
  b.   Propeller
  c.   Wind station
  d.   Wind turbine
109   A place where many wind turbines are installed together to produce   [   ]
       electricity is called a
  a.   Wind farm
  b.   Propeller collection
  c.   Wind station
  d.   Wind turbine station
110   Wind blows because of a difference in   [   ]
  a.   Temperature
  b.   Latitude

    c. Longitude

    d. Height

111 Wind turbines using aerodynamic lift produce more energy for a given area than wind turbines using aerodynamic drag as the   [   ]

    a. Lifting force pushes the blade in the direction of the wind

    b. Lifting force mis roughly perpendicular to the local flow fields

    c. Lifting force produces more torque

    d. Drag services capture more energy because of greater friction on the blade surfaces

112 The relationship between power available from wind 'P' and wind velocity 'v' is   [   ]

    a. $P \alpha v$

    b. $P \alpha v^2$

    c. $P \alpha v^3$

    d. $P = v$

113 An anemometer is an instrument used for measurement of   [   ]

    a. Solar radiation

    b. Wind speed

    c. Temperature gradient

    d. Depth in ocean

114 Lower speed wind turbines are mainly driven by   [   ]

    a. Drag forces

    b. Lift forces

    c. Push forces

    d. None of the above

115 The torque causing the rotation of a rotor is due to the   [   ]

    a. Drag force

    b. Gravitational force

    c. Force of lift

    d. Axial thrust

116 With increase in height, wind speed   [   ]

    a. Increases

    b. Decreases

    c. Remains the same

    d. None of the above

117 Wind power plants are required to have a large rotor size for large power output due to   [   ]

    a. Low power density of air stream

    b. Lift force acting perpendicular to the direction of wind flow

    c. Lift force being more than drag force

    d. Drag force acting perpendicular to lift force

118 Which of the following forces act on the blades of wind turbine rotor?   [   ]

    a. Lift force

    b. Drag force

    c. Both (a) & (b)

    d. None of the above

119 Wind machine with Darrious type of rotor is a   [   ]
    a. Vertical axis machine
    b. Horizontal axis machine
    c. Machine that can spin in one direction only
    d. None of the above

120 During the day, the surface wind flows   [   ]
    a. From sea to land
    b. From land to sea
    c. On the surface of the sea
    d. On the surface of land

121 Air density at standard conditions is about   [   ]
    a. 1.885 kg/m^3
    b. 2.55 kg/m^3
    c. 1.226 kg/m^3
    d. 3.267 kg/m^3

122 The main disadvantage of wind power is that   [   ]
    a. It is available only in coastal areas
    b. Wind energy systems are noisy when in operation
    c. Large land area is required
    d. The capacity utilization is less

123 Wind energy conversion devices based on drag force   [   ]
    a. Move faster than wind
    b. Move slower than wind
    c. Move slower than wind
    d. Do not depend on the velocity of wind

124 **The rate of change of wind speed with height is called**   [   ]
    a. Wind shear
    b.   Wind rose
    c. Wind solidity
    d. None of the above

125 **The wind intensity can be described by**   [   ]
    a. Reynolds number
    b. Mach number
    c. Beaufort number
    d. Froude number

Signature of the faculty   **Signature of the HOD**

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

IV.B.TECH& II-sem (MR 15)
I Mid Examination Subjective Question Bank

Subject: Utilization of Electrical Energy   **Branch: EEE**
Subject Code: 50238
Name of the faculty: Dr. D. Raja Reddy

MODULE I

Q.No	Question	Bloom's Taxonomy Level	CO
1.	Classify the different methods of electric heating.	Understanding	1
OR			
2.	Explain the concept of direct resistance heating method.	Understanding	1
3.	Explain the concept of indirect resistance heating method	Understanding	1
OR			
4.	Explain the construction and working of direct arc furnace	Understanding	1
5.	Explain the construction and working of indirect arc furnace	Understanding	1
OR			
6.	Explain the construction and working of resistance welding method.	Understanding	1
7.	Explain the construction and working of arc welding method.	Understanding	1
OR			
8.	Explain the construction and working of dielectric heating.	Understanding	1

MODULE II

Q.No.	Question	Bloom's Taxonomy Level	CO

1.	Analyze the working of fluorescent tube with the help of a circuit diagram given function of various parts.	Analyzing	2
OR			
2.	Classify the different types of lighting schemes	Analyzing	2
3.	Explain the working of filament lamp with the help of a circuit diagram.	Understanding	2
OR			
4.	Explain the street lighting and flood lighting	Understanding	2
5.	Explain the laws of illumination	Understanding	2
OR			
6.	Explain the working of MV and SV lamps with the help of a circuit diagram.	Understanding	2
7.	Explain the basic principle of light control.	Understanding	2
OR			
8.	Explain about photometry and polar curves.	Understanding	2

MODULE III

Q.No.	Question	Bloom's Taxonomy Level	CO
1.	Explain the different systems of electric traction existing in India.	Understanding	3
OR			
2.	Explain the track Electrification.	Understanding	3
3.	Explain the method of electric plugging braking.	Applying	3
OR			
4.	Explain the method of electric rheostatic braking.	Applying	3

Signature of the Faculty   **Signature of HOD**

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

IV-M.Tech II- Sem I Mid Examination objective Question Bank

Subject: UEE   **Branch : EEE**
Subject Code: 50238
Name of the faculty: Dr.RAJA REDDY. DUVVURU

Module-I

1. Which of the following heating element will have the least temperature range?   [
    ]
    (a) Eureka   (b) silicon carbon   (c) Nichrome   (d) kanthal

2. Which of the following heating element can give highest temperature range in resistance
    Heating?   [   ]

    (a) Nichrome   (b) silicon carbide   (c) copper   (d) nickel-cr-fe alloy

3. Direct resistance heating is used in   [   ]
    (a) Electrode boiler   (b) salt bath furnace   (c) resistance welding   (d) all of above

4. Radiant heating is used for   [   ]
    (a) Melting of ferrous metal   (b) annealing of metal

    (c) Drying of paints and varnishes   (d) all of above

5. Induction heating takes place in   [   ]
    (a) Insulating materials   (b) conducting and magnetic materials

    (c) Conducting but non magnetic materials

    (d) Conducting material but may be magnetic or non magnetic

6. Induction furnaces are used for   [
    ]
    (a) Heat treatment of casting   (b) heating of insulations

    (c) Melting of aluminum   (d) all of above

7. High frequency induction heating is used for   [   ]
   (a) Ferrous metals only   (b) non ferrous metals only

   (c) Both ferrous and non ferrous metals only   (d) all of above

8. In dielectric heating current flows through   [   ]
   (a) Air   (b) dielectric   (c) metallic conductor

   (d) Ionic discharge between dielectric medium and metallic conductor

9. For dielectric heating the range of frequency normally employed is   [   ]
   (a) 10KHZ to 100KHZ   (b) 100KHZ to 10MHZ   (c) 1MHZ to 10MHZ (d) 10MHZ to 40MHZ

10. The material of the heating element should be   [   ]
    (a) Such that if may withstand the required temperature without getting oxidized

    (b) At low resistivity   (c) at low melting point (d) at high temperature coefficient

11.Heat is transferred simultaneously by condition, convection and radiation   [   ]

(a) inside boiler furnaces   (b) during melting of ice

(c) through the surface of the insulted pipe carrying steam

(d) from refrigerator coils to freezer of a refrigerator

12. The process of heat transfer during the reentry of satellites and missiles, at very high speeds, into earth's atmosphere is known as   [   ]

(a) ablation   (b) radiation   (c) viscous dissipation   (d) irradiation

13. Which of the following has the highest value of thermal conductivity ?   [   ]

(a) Water   (b) Steam   (c) Solid ice   (d) Melting ice

14. Induction heating process is based on which of the following principles ?   [   ]

(a) Thermal ion release principle   (b) Nucleate heating principle

(c) Resistance heating principle   (d) Electro-magnetic induction principle

15. Which of the following insulating materials was suitable for low temperature applications ?[   ]

(a) Asbestos paper   (b) Diatomaceous earth (c) 80 percent magnesia(d) Cork

16. A non-dimensional number generally associated with natural convection heat transfer is[   ]

(a) Prandtl number   (**b)** Grashoff number   (c) Pecelet number   (d) Nusselt number

17. The temperature inside a furnace is usually measured by which of the following ?   [   ]

(a) Optical pyrometer   (b) Mercury thermometer

(c) Alcohol thermometer   (d) Any of the above

18. Which of the following will happen if the thickness of refractory wall of furnace is increased ? [ ]

(a) Heat loss through furnace wall will increase   (b) Temperature inside the furnace will fall

(c) Temperature on the outer surface of furnace walls will drop

(d) Energy consumption will increase

19. The material of the heating element for a furnace should have   [

]

(a) lower melting point   (b) higher temperature coefficient

(c) high specific resistance   (d) all of the above

20. In a resistance furnace the atmosphere is   [   ]

(a**)** oxidizing   (b) deoxidizing   (c) reducing   (d) neutral

21. In electric resistance welding [   ]

   (a) The current required exceeds 100   (b) The voltage required ranges from 4 to 12 V

   (c) power supplied to the weld usually ranges from 60 W to 80 W for each   Square mm of area

   (d) All of above

22. Proper selection of welding depends upon in addition to cost involved [   ]

   (a) Kinds of metals to be joined   (b) nature of product to be fabricated

   (c) Production technique used   (d) All of above

23. In flash butt welding [   ]

   (a) No special preparation of the faces to be weld is necessary

   (b) Clean and pure weld is obtained   (c) power requirement is less   (d) All of above

2 4.   Spot welding process basically depends on [   ]

   (a) Generation of heat   (b) application of forging process

   (c) Both a & b   (d) ohmic resistance

25.   Projection welding can be considered as a mass production from at [   ]

   (a) Seam welding   (b) spot welding   (c) upset welding   (d) flash welding

26.   In seam welding [   ]

   (a) The work piece is fined and disc electrode move

   (b) The work piece is moves but rotating electrodes are fined

(c) The electrodes used are of disc (or) roller shape   (d) either a or b & c

2 7. In an electric arc welding the voltage required to maintain the arc will be   [   ]

   (a) 250-500 V (b) 150-250 V   (c) 20-30 V   (d) below 20 V

2 8. For an electric arc welding the current range is used   [   ]

   (a) 50-100 A   (b) 30-50 A   (c) 20-30 A   (d) below 20 A

 29. Carbon arc welding as the main drawback of   [   ]

   (a) Occurrence of blow holes owing to magnetic arc below especially while welding near of the

     Work piece

   (b) Need of separate filter (c) necessary of bare electrodes   (d) fast consumption of electrodes

 30. Submerged arc process is characterized by   [   ]

   (a) High welding current   (b smooth heads   (c) deep penetration   (d) all of above

 31. Which of the following joint have high corrosion resistance?   [   ]

  (a)   Welding joint   (b) Riveted joint   (c) Bolted joint   (d) None of the above

 32. Which of the following ray is not produced during welding?   [   ]

  (a)   Gamma rays   (b) Visible light rays   (c) Infrared ray   (d) None of the above

 33.Single-V and single-U butt welds are used for sheets of thickness   [   ]

  (a)   upto 10mm   (b)   5-15mm   (c)   0-20mm   (d)1   5-25mm

  34.Double-V and double-U butt welds are used for plates of thickness   [   ]

        (a)   1-5mm   (b)   5-10mm   (c)   10-15mm (d) Over 15mm

35.Which of the following types is not fillet weld?   [   ]

(a)butt joint   (b)lap joint   (c)T-joint   (d)Corner joint

36.The metals having good weldability, in descending order are   [   ]

(a)cast steel, iron, carbon steel, cast iron   (b)carbon steel, iron, cast steel, cast iron

(c)iron, carbon steel, cast steel, cast iron   (d)cast iron, iron, carbon steel, cast steel

37.In fusion welding, penetration is the ratio of   [   ]

(a)width of the weld to its depth   (b)length of the weld to its depth

(c)depth of the weld to its width   (d)depth of the weld to its length

38.Which of the following is an example of plastic welding?   [   ]

(a)Gas welding (b)Arc welding (c)Forge welding   (d)Thermit welding

 39.Which of the following is an example of fusion welding?   [   ]

(a)Arc welding (b)Forge welding   (c)Resistance welding   (d)Thermit welding with pressure

40.Which of the following welding process is used for welding of sheet metals in automobile and air craft industries?   [   ]

(a)Shield metal arc welding   (b)Gas tungsten arc welding

(c)Thermit welding   (d)Resistance welding

41.Which of the following insulating materials was suitable for medium temperature applications [   ]

(a) Asbestos paper   (b) Diatomaceous earth (c) 80 percent magnesia(d) none

42. A non-dimensional number generally associated with natural convection heat transfer is[   ]

(a) Prandtl number   **(b)** Grashoff number   (c) Pecelet number   (d) Nusselt number

43. The temperature inside a arc furnace is usually measured by which of the following   [   ]

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49. Direct Induction heating takes place in   [   ]

(a) Insulating materials   (b) conducting and magnetic materials

(c) Conducting but non magnetic materials

(d) Conducting material but may be magnetic or non magnetic

50.Indirect Induction furnaces are used for   [   ]

(a) Heat treatment of casting   (b) heating of insulations

(c) Melting of aluminum   (d) none

Module -II

1. Light   [   ]

  (a) Is a form of heat energy   (b) Is a form of electrical energy

  (c) Consist of electromagnetic waves   (d) consist of shooting particles

2. An object which appears red to the eyes absorbs   [   ]

   (a) Blue radiations   (b) violet radiations   (c) green radiations   (d) all of the above

3. Sky appears blue due to   [   ]

   (a) Radiation (b) reflection   (c) refraction   (d) scathing of light over dust particles

4. A fluorescent tube can be operated on   [   ]

      (a) Both DC as well as AC (b) AC only   (c) DC only (d) satisfactorily only on DC

5. Luminous flux is   [   ]

   (a) The rate of energy radiation in the form of light wave

   (b) The part of light energy radiated by the sun that is received in earth

   (c) Measuring in lux   (d) none

6. Candle power is   [   ]

   (a) The luminous flux emitted by the source per unit solid angle

   (b) The light radiated capacity of a source in a given direction

   (c) The unit of illumination   (d) all of the above

7. The illumination at various points in a horizontal surface illuminated by the same source varies as

(a) $\cos\theta$ (b) $\cos^2\theta$ (c) $\cos^3\theta$ (d) $\dfrac{1}{\cos\theta}$ [   ]

8. An electric bulb when broken producer bang it is an account of   [   ]

   (a) Vacuum inside the bulb   (b) pressure inside is equal to that out side

   (c) Pressure at air in the bulb   (d) none

9. Sodium vapor lamp needs an ionization voltage of about   [   ]

   (a) 5 V   (b) 20 V   (c) 50 V   (d) 100 V

10. The illumination level in houses is in the range of   [   ]

   (a) 20-50 lux   (b) 100-200 lux   (c) 300-500 lux (d) 700 lux

11. The frequency of flickers in a fluorescent lamp at 220 V, 50 Hz supply will be   [   ]
(A) 25 per second   (B) 50 per second
(C) 100 per second   (D) 220 per second.

12. Wavelength of green color is nearly   [   ]
(A) 4000 A   (B) 4500 A   (C) 5000 A   (D) 5500 A.

13. One Angstrom is   [   ]
(A) 10^{-6} meter   (B) 10^{-8} meter   (C) 10^{-8} cm   (D) 10^{-8} mm.

14. Which of the following color has wave-length between green and color ?   [   ]
(A) Yellow   (B) Blue   (C) Violet   (D) None.

15. The purpose of providing a choke in a tube light is   [   ]
(A) to eliminate corona effects   (B) to avoid radio interference
(C) to improve power factor   (D) to limit current to appropriate value.

16. A 60 W lamp given a luminous flux of 1500 lumen. Its efficiency is   [   ]
(A) 1500 lumen/watt   (B) 250 lumen/watt   (C) 25 lumen/watt   (D) 2.5 lumen/watt.

17. One lux is the same as   [   ]
(A) one lumen/sq. cm   (B) one lumen/sq. m (C) one lumen/100 sq. m (D) one lumen/1000 sq. m.

18. The vacuum inside an incandescent lamp is of the order of   [   ]
(A) 10^{-2} mm Hg (B) 10^{-3} mm Hg   (C) 10^{-4} mm Hg (D) 10^{-5} mm Hg.

19. Which of the following application does not need ultra-violet lamps?   [   ]
(A) Medical purposes   (B) Aircraft cockpit dashboard lighting
(C) Car lighting   (D) Blue print machines.

20. When using ultra-violet lamps the reflector for maximum should be made of   [   ]
(A) aluminium (B) copper   (C) leaf   (D) glass.

21. In the process of electroplating the circuitry involved is   [   ]
   (a) Polarised   (b) Non-Polarised
   (c) Depends upon nature of plating   (d) None out of above

22. The existence of a counter electrode is observed some where is the   [   ]
   (a) Plating vats   (b) Electro-chemical cleaning baths
   (b) D.C supply sources (d) Nothing as above is connected with the plating system

23. The capacitor bank installed in the rectifier system of any electroplating
   Plant is meant for   [   ]
   (a) Smoothing the effects of loads variation
   (b) Minimizing the ripple content of the D.C. supply
   (c) To improve power factor and line regulation of the mains feeding the

rectifier system

(d) All as above

24. The object undergoing surface plating work as   [   ]
   (a) Cathode   (b) Anode   (c) Depends upon nature of supply source

25. The compound gensets used for the purpose are   [   ]
   (a) Differentially excited (b) Cumulatively excited (c) Depends up on plating rod

26. The preferred vat polarity is   [   ]
   (a) Positive   (b) Negative
   (c) Zero potential without any polarity   (d) An arbitrary choice

27. Spongy coating of electroplating speaks of   [   ]
   (a) Under current density   (b) Over current density
   (c) Excessive electrolyte density   (d) Poorer electrolyte density

28. The metal being deposited is available in form of   [   ]
   (a) Constituent of electrolyte   (b) One of the electrodes
   (c) Both as above   (d) None out of above

29. Chrome plating done as   [   ]
   (a) primary layer (b) Secondary layer   (c) Tertiary layer

30. Polarization on cathode surface can be checked through   [   ]
   (a) Limiting current magnitude   (b) Agitation of electrolyte
   (c) Periodical reverse plating   (d) All as above

31. 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

32. The output voltage of a charger is   [   ]
(a) less than the battery voltage   (b) higher than the battery voltage

(c) the same as the battery voltage   (d) none of the above

33. Cells are connected in series in order to   [   ]
   (a) increase the voltage rating   (6) increase the current rating

(c) increase the life of the cells   (d) none of the above

34. Five 2 V cells are connected in parallel.   The output voltage is   [   ]

(a) 1 V   (6) 1.5 V   (c) 1.75 V   (d) 2 V

35. 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

36. Duringthe charging and discharging of a nickel-iron cell   [   ]

(a) corrosive fumes are produced   (b) water is neither formed nor absorbed

(c) nickel hydroxide remains unsplit   (d) its e.m.f. remains constant

37. As compared to constant-current system, the constant-voltage system of charging a lead acid
cell has the advantage of   [   ]

(a) reducing time of charging   (b) increasing cell capacity

(c) both (a) and (b)   (d) avoiding excessive gassing

38. A dead storage battery can be revived by   [
]

(a) adding distilled water   (6) adding so-called battery restorer

(c) a dose of H2SO4   (d) none of the above

39. As compared to a lead-acid cell, the efficiency of a nickel-iron cell is less due to its

(a) compactness   (b) lower e.m.f.   [   ]

(c) small quantity of electrolyte used   (d) higher internal resistance

40. Trickle charging of a storage battery helps to   [   ]

(a) maintain proper electrolyte level   (b) increase its reserve capacity

(c) prevent sulphation   (d) keep it fresh and fully charged

41. mercury vapor lamp needs an ionization voltage of about   [   ]

(a) 5 V   (b) 20 V   (c) 50 V   (d) none

42. The illumination level in factories is in the range of   [   ]

(a) 20-50 lux   (b) 100-200 lux   (c) 300-500 lux (d) none

43. The frequency of flickers in a incandicent lamp at 220 V, 50 Hz supply will be   [   ]
(A) 25 per second   (B) 50 per second
(C) 100 per second   (D) none

44. Wavelength of yellow color is nearly   [   ]
(A) 4000 A   (B) 4500 A   (C) 5000 A   (D) none

45. One Angstrom is   [   ]
(A) 10^{-6} meter   (B)10^{-8} meter   (C) 10^{-8} cm   (D) none

46. Which of the following color has wave-length between green and color ?   [   ]
(A) Yellow   (B) Blue   (C) Violet   (D) None.

47. The purpose of providing a choke in a tube light is   [   ]
(A) to eliminate corona effects   (B) to avoid radio interference
(C) to improve power factor   (D) to limit current to appropriate value.

48. A 80 W lamp given a luminous flux of 2000 lumen. Its efficiency is   [   ]
(A) 1500 lumen/watt   (B) 250 lumen/watt   (C) 25 lumen/watt   (D) none

49. One lux is the same as   [   ]
(A) one lumen/sq. cm   (B) one lumen/sq. m (C) one lumen/100 sq. m (D) one lumen/1000 sq. m.

50. The vacuum inside an fluorescent lamp is of the order of   [   ]
(A) 10^{-2} mm Hg (B) 10^{-3} mm Hg   (C) 10^{-4} mm Hg (D) none

Module-III

1. The basic element of an electric drives are   [   ]

(a) Electric motors and transmission system

(b) Electric motors, transmission and control system

(c) Transmission and control system   (d) electric motors and conversion equipment

2. A typical active load is   [   ]

  (a) Hoist   (b) blower   (c) pump   (d) lathe

3. An elevator drive is required   [   ]

  (a)One quadrant   (b) two quadrants   (c) three quadrants   (d) four quadrants

4. Load torque constant at all speeds is represents by a   [   ]

  (a) Fan (b) compressor   (c) centrifugal pump   (d) none

5A DC series motor is used for an over hauling load. It can work stably if   [   ]

  (a) The armature is shunted by a resistor   (b) the field winding is reverse

  (c) A resistor is put in series with a machine   (d) a diverter is put across the field

6. Which motor should not be used for centrifugal pumps?   [   ]

  (a) Shunt   (b) series   (c) cumulatively compound   (d) differential compound

7. For cumulatively running rolling mills with intermittent loading, the most suitable DC drive is

                                                                          [   ]

  (a) DC series motor   (b) DC shunt motor

  (c) DC differential compound motor   (d) Cumulatively compound motor

8. Speed control by variation of field flux result in   [   ]

   (a) Constant power drive   (b) variable power drive

   (c) constant torque drive   (d) Variable torque drive

9. The electric braking system commonly employed in rolling mill elevators and printing

   Process is   [   ]

   (a) Plugging   (b) rheostatic   (c) dynamic   (d) regenerative

10. The following converters can feed power in any of the four quadrants   [   ]
    (a) Semi converter   (b) full converter   (c) dual converter

    (d) Combination of semi and full converters

11. Which of the following is preferred for automatic drives?   [   ]

    a) Synchronous motors   b) Squirrel cage induction motor

    c) Ward-Leonard Controlled dc motor   d) any of these

12. Which type of drive can be used for hoisting machinery?   [   ]

   a) Slip ring induction motor   b) Ward Leonard controlled dc shunt motor

   c) DC compound motor   d) any of these

13. The motor normally used for crane is   [   ]

   a) Slip- ring induction motor   b) Ward Leonard Controlled DC shunt motor

   c) Synchronous motor   d) DC differentially compound motor

14. A wound rotor induction motor is preferred over squirrel cage induction motor when the major
consideration involved is   [

a) high starting torque   b) low starting current

c) speed control over limited range   d) all of these

15. When smooth and precise speed control over a wide range is desired, the motor preferred is

a) synchronous motor   b) squirrel cage induction motor   [   ]

c) wound rotor induction motor   d) dc motor

16. when quick speed reversal is a consideration the motor preferred as   [   ]

a) synchronous motor   b) squirrel cage induction motor

c) wound rotor induction motor   d) dc motor

17. DC supply can be obtained from AC supply by the use of   [   ]

a) motor generator set   b) mercury arc rectifier

c) silicon diodes   d) any of these

18. The selection of control gear for a particular application is based on the consideration of

a) duty   b) starting torque   [   ]

c) limitations on starting current   d) all of these

19. The consideration involved in the selection of the type of electric drive for a particular application
depends on   [   ]

a) speed control range and its nature   b) starting torque

c) environmental conditions   d) all of these

20. As compared to squirrel cage induction motor a wound rotor induction motor is preferred when the
major consideration is   [   ]

a) high starting torque

b) low windage losses

c) slow speed operation

d) all of these

21. Main traction system used in India are using _____ locomotives   [   ]

   (a) Steam engine   (b) diesel engine   (c) electric engines   (d) all of the above

22. Sub urban railways use   [   ]

   (a) 1500 V DC (b) 400 V, 3 phase AC   (c) 330 V 3 phase AC   (d) 600 V 3 phase AC

23. Long distance railways operate in   [   ]

   (a) 600 V DC   (b) 25 KV single phase AC   (c) 25 KV 3 ph AC   (d) 15 KV 3 ph AC

24. The braking retardation for urban (or) sub urban service is   [   ]

   (a) 1.5-2.5 KMPHS   (b) 3-4 KMPHS   (c) 5-10 KMPHS (d) 0.5-1.5 KMPHS

25. The maximum speed at which trains run in main line railway service is   [   ]

   (a) 160 KMPH (b) 120 KMPH   (c) 100 KMPH   (d) 200 KMPH