Model Question Papers

Rural Engineering Technician

MODEL QUESTION PAPER
COURSE : RURAL ENGINEERING TECHNICIAN
SUBJECT : WORK SHOP TECHNOLOGY
FIRST YEAR PAPER-I

Time : 3 Hours   **Max. Marks : 50**

Section - A

Note : (i) Answer all the Questions   10 x 2 = 20
        (ii) Each Question carries 2 marks

1.   What are the Ferrous and Non-Ferrous metals?

2.   What are the comon tools used in fitting section?

3.   Mention the parts of clisel and hammer?

4.   What are the common tools used in smithy?

5.   What is meant by extrusion.

6.   what are the safety precautions to be followed while practicing are welding?

7.   What are the marking and measuring tools used in carpentary?

8.   What is the use of Drilling machine and name its parts?

9.   What are the materials used for making a grinding wheel?

10.   What are the parts of a Lathe?

Section - B

Note : (i) Answer any 5 Questions   5 x 6 = 30
        (ii) Each Question carries 6 marks

11.   What are the general safety precautions to be taken for preventing accidents?

12.   Sketch and explian briefly about any two types of marking tools used in fitting?

13.   Write briefly about soldering and brazing work used in sheet metal?

14. Write a short note on smithly forge (or) Hearth and Anvil?

15. Explain briefly about elecric are welding with the help of a neat sketch?
16. Explain briefly any two types of cutting tools used in carperntary?
17. Explain with help of a neat sketch?
18. Explain briefly about oxy-accetylene flames with sketches?

MODEL QUESTION PAPER
COURSE : RURAL ENGINEERING TECHNICIAN
SUBJECT : MECHANICAL TECHNOLOGY
FIRST YEAR PAPER-II

Time : 3 Hours   **Max. Marks : 50**

Section - A

Note : (i) Answer all the Questions   10 x 2 = 20
  (ii) Each Question carries 2 marks

1.   Define Termodynamic System?

2.   State Boyles Law?

3.   What are the different types of Thermodynamic Processes?

4.   What is meant by the term fuel and what are its contituents?

5.   Mention the different types of solid, liquid and gaseous fuels?

6.   Define Heat Engine?

7.   Mention the parts of Diesel engine?

8.   What are the functions of a pump?

9.   What are the components of a sprinkler?

10.   What are the main parts of Reciprocating and submersible pumps?

Section - B

Note : (i) Answer any 5 Questions   5 x 6 = 30
  (ii) Each Question carries 6 marks

11.   Explain briefly about the types of Thermodynamic Systems?

12.   Define the terms Pressure, Atmospheric Pressure, Temperature, and Enthalpy?

13.   State Charle's Law, Avagadro's Law and Joule's Law?

14.   State Laws of Termodynamics?

15.   Derive an expression for the work done during the constant volume process?

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16. Give a brief account on different types of solid fuels?
17. Explain the working principle of a four stroke petrol engine?
18. Explain the working of contrigugal pumps with the help of a neat sketch?

MODEL QUESTION PAPER
<u>COURSE : RURAL ENGINEERING TECHNICIAN</u>
<u>SUBJECT : ELECTRICAL TECHNOLOGY</u>
<u>FIRST YEAR PAPER - III</u>

No. of Questions : 18

Time : 3 Hours   **Max. Marks : 50**

<u>Section - A</u>

Note : (i) Answer all the Questions   10 x 2 = 20
      (ii) Each Question carries 2 marks

1.   Name hand tools used for electrical work

2.   Define Ohm's Law?

3.   What is Electrical Power?

4.   What is Semi Conductor?

5.   Name some types of switches

6.   What is Flux density?

7.   What is Electro magnetic Induction?

8.   List out main componenets in Generator

9.   What is the use of Geyser

10.   Write two differences between primary and Secondary Cells?

Section - B

11. a) Define Kirchhoff's Laws

     b) Define laws of Resistance

12. In an Electrical Installation 16 tube lights of 40 w each, 12 fans 60w each works for 12 hours/day. 1 HP Motor pump set works for 5 hours/day. 100w light 6 No's each works for 5 hours/day. Calculate Electric bill for the installation per month @ Rs.1.50/- BOT Unit. Add Rs.5/- for meter rent for month

13. List out and mention the uses of important electrical accessories

14. a) How the magnetic fielf created around a current carrying conductor?

     b) Compare electric circuit with a magnetic circuit

15. Classify and explain the inductance

16. Explain working of D.C.Motor with a Sketch

17. Explain working of Electric Iron with a Circuit diagram

18. Briefly explain about lead-acid battery

MODEL QUESTION PAPER
COURSE : RURAL ENGINEERING TECHNICIAN
SUBJECT : NON-CONVENTIONAL ENERGY SOURCES
SECOND YEAR PAPER - I

No. of Questions : 18

Time : 3 Hours   **Max. Marks : 50**

Section - A

Note : (i) Answer all the Questions   10 x 2 = 20
      (ii) Each Question carries 2 marks

1.   What are teh different forms of Energy?

2.   What are the conventional and Non-conventional sources of Energy?

3.   What is Global radiation?

4.   What are the basic components of Solar Water Pumping?

5.   Define Solar Collector and give examples?

6.   How the wind mills are classified?

7.   What are the raw materials required for Biogas generation?

8.   Mention the parts of Bio gas plant?

9.   What are the different fuels used in fuel cells?

10. What are the basic components of Tidal Power Plant?

Section - B

Note : (i) Answer any 5 Questions   5 x 6 = 30
      (ii) Each Question carries 6 marks

11. What are the conventional sources of Energy and explain briefly?

12. Explain Pyramometer with the help of neat sketch?

13. Explain briefly about solar water pumping with the help of a neat sketch?

14. Explain any one of the solar collectors with the aid of neat sketch?

15. Explain constructional details of a box type solar cooker?
16. Explain briefly about horizontal wind mill?
17. Explain briefly about K.V.I.C. Biogas plant?
18. Explain briefly about the constructional details of Fuel Cell?

MODEL QUESTION PAPER
COURSE : RURAL ENGINEERING TECHNICIAN
SUBJECT : FARM EQUIPMENT & TRACTORS
SECOND YEAR PAPER-II

No. of Questions : 18

Time : 3 Hours　　　　　　　　　　　　**Max. Marks : 50**

Section - A

Note : (i) Answer all the Questions　　　　10 x 2 = 20
　　　　(ii) Each Question carries 2 marks

1.　List out main assemblies in a tractor

2.　What are the function of piston?

3.　What is the importance of lubrication in engine?

4.　What are the power trains?

5.　How steering wheel is arranged?

6.　What are the objectives of tillage?

7.　How do you classify the tillage implements?

8.　Listout sowing methods?

9.　What is meant by winnowing?

10.　What is the difference between sprayer and duster?

Section - B

Note : (i) Answer any five Questions   5 x 6 = 30

        (ii) Each Question carries 6 marks

11.   Describe working of crank shaft with a neat sketch

12.   Describe the working of Mechanical Governor with a neat sketch

13.   Explain with a neat sketch about constant mesh Gear box.

14.   a) What are the advantages of Hydraulic System?

        b) What is the importance of steering System?

15.   Explain construction of Mould Board plough with a neat sketch?

16.   Describe animal drawn seed drill.

17.   Describe the construction and working of mower

18.   Explain working of power sprayer with a neat sketch

MODEL QUESTION PAPER
COURSE : RURAL ENGINEERING TECHNICIAN
SUBJECT : DOMESTIC APPLIANCES
SECOND YEAR PAPER - III

No. of Questions : 18

Time : 3 Hours   **Max. Marks : 50**

Section - A

Note : (i) Answer all the Questions   10 x 2 = 20
      (ii) Each Question carries 2 marks

1. Define Refrigeration?

2. What are the different types of compressors and condensers used in vapour Compression Refrigeration System?

3. Define Dry bulb and wet bulb temperature?

4. Whatr are the parts of a Refrigerator?

5. What are the main parts of an Air Cooler?

6. What are the main parts of a Washing Machine?

7. What are the main parts of Grinder and Mixer?

8. What are the main parts of Gas stove?

9. What are the main parts of petromax light and Gas light?

10. What is the use of handle and brakes in a Bicycle?

Section - B

Note : (i) Answer any 5 Questions   5 x 6 = 30
      (ii) Each Question carries 6 marks

11. Explain vapour compression Refrigeration cycle with the help of a neat sketch?

12. Explain briefly about psychrometric properties?

13. Explain briefly about an Air Coler with the help of a sketch?

14. How does washing machine works? Explain with neat sketch?

15. Explain briefly about the parts of wet grinder with the help of a neat sketch?

16. Explain briefly about the parts of a mixy with the help of neat sketch?

17. Write the trouble shooting chart of a gas stove?

18. Explain the construction and working of a bicycle?

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