



### SECTION-B

11. Differentiate between Petrol and diesel engine?
12. Write a procedure for calibration of seed drill? Why seed calibration is necessary?
13. Find the horse power developed by small tractor pulling a plough at the forward speed of 3 kmph. The plough makes a furrow of 20 cm wide and 11 cms deep. The dynamometer Indicates an average draft of 85 kg. What will be the unit draft.
14. What are the names of different straw management machines that can be used for direct sowing of wheat sowing in combine harvested paddy fields?
15. What are different types of cooling systems? Explain with a neat sketch of the forced circulation cooling system.

### SECTION-C

16. a) What are the functions of combine? Draw a neat sketch of combine with nomenclature and also the function of each part?  
b) Give the sketches of various types of threshing drums and discuss each in brief.
17. Write a short note on different sources of power available in India with merits and demerits also?
18. Calculate the cost of operation per hour of a thresher operated by a 35 hp tractor. Also find the cost of operation of the thresher per tonne.

**Given :**

Price of a tractor = Rs. 5, 00,000/-;

Price of a thresher = Rs. 65,000/-

Life of a tractor = 15 years;

Life of thresher = 10 years

Salvage valuer = 10%;

Interest rate = 10%

Shelter and Insurance = 2 % of purchase price;

Price of diesel = Rs. 56 per litre

No. of labour employed with thresher = 4

Labour charges = Rs. 20 per hr

Driver charges = Rs. 50 per hr

Annual use of tractor = 800 hour

Annual use of thresher = 250 hrs

Output of thresher = 800 kg/hr

Depreciation = straight line method

Assume any other information necessary.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**