

BE Semester-7 (mechanical) Question Bank

Subject Name: INTERNAL COMBUSTION ENGINES (EP-I)

All questions carry equal marks(10 marks)

Q.1	Explain the variation of spray characteristics with pressure variation in diesel injector.
Q.2	Classify the combustion chambers of C.I. engines. Explain with neat sketch the working of "M" combustion chamber.
Q.3	Enlist the methods of controlling diesel knock. Discuss any three of them.
Q.4	Explain distributor type fuel injection pump with neat sketch.
Q.5	A simple carburetor under a certain condition delivers 5.45 Kg/h of petrol with an air-fuel ratio of 15 . The fuel jet area is 2 mm^2 with a co-efficient of discharge of 0.75.If the tip of the fuel jet is 6.35 mm above the level of petrol in the float chamber and the venturi throat co-efficient of discharge is assumed to be 0.80.Calculate (1) The venture depression in mm of H_2O necessary to cause air and fuel flow at the designed rate. (2) The venturi throat diameter. (3) The velocity of air across the venturi throat. Take $\rho_{\text{air}}=1.29 \text{ Kg/m}^3$ and specific gravity of petrol=0.72
Q.6	Valve timing diagram of 4-stroke diesel engine.
Q.7	Valve timing diagram of 4-stroke petrol engine.
Q.8	Explain pressure feed type wet sump lubrication system with neat sketch.
Q.9	Diesel engine emission and its control.
Q.10	Stratified charge engine.
Q.11	Explain turbocharging in C.I. engines.
Q.12	Bio-fuel as an alternate fuel.
Q.13	Pollutants from gasoline engines and its control.
Q.14	Explain magneto ignition system with neat sketch with its merits and demerits.
Q.15	Stages of combustion in SI engine.
Q.16	Stages of combustion in CI engine.
Q.17	Discuss in brief the variables affecting delay period in CI engine.
Q.18	S U Carburetor.
Q.19	Explain in brief the testing procedures of I.C. engine as per IS-10001.
Q.20	Explain with neat sketch the working of wankel engine.
Q.21	Explain turbocharging and supercharging in S.I. engines.
Q.22	Discuss in brief the variables affecting delay period in CI engine.
Q.23	Explain the working of simple Carburetor with neat sketch.
Q.24	What is cold starting in Diesel engine ? Explain various cold starting aid with neat sketch.
Q.25	Governing of SI engine.
Q.26	Governing of CI engine.
Q.27	Stages of combustion in SI engine.

Q.28	Explain battery ignition system with neat sketch with its merits and demerits.
Q.29	Differentiate between battery and magneto ignition system.
Q.30	Differentiate between two stroke and four stroke I.C. engine..
Q.31	Differentiate between C.I engine AND S.I. Engine I.C. engine..
Q.32	Methods to improve octane rating of fuels.
Q.33	Differentiate between dry sump and wet sump system of lubrication.
Q.34	Explain MPFI system.
Q.35	Classify I.C. engine.
Q.36	Explain engine performance parameters.
Q.37	Explain the MORSE test of I.C. engine.
Q.38	Describe the engine scavenging methods.
Q.39	Explain types of air motion in I.C. Engine.
Q.40	Explain in detail the Delay period.