Program: BE Mechanical Engineering

Curriculum Scheme: Revised 2012

Examination: Third Year Semester V

Course Code: MEC501 and Course Name: I C Engines

Time: 1hour

Max. Marks: 50

Note to the students:- All the Questions are compulsory and carry equal marks .

Q1.	In which engine spark plug is used
Option A:	The Homogeneous Charge Compression Ignition engine
Option B:	Sterling Engine
Option C:	Petrol Engine
Option D:	Diesel Engine
Q2.	Following material is used for manufacturing Engine Cylinder Block
Option A:	Nickel
Option B:	Grey Cast iron
Option C:	Fiber
Option D:	Plastic
Q3.	During Expansion Stroke Piston moves from
Option A:	Right Dead Centre to Left Dead Centre
Option B:	Left Dead Centre to Right Dead Centre
Option C:	Bottom Dead Centre to Top Dead Centre
Option D:	Top Dead Centre to Bottom Dead Centre
Q4.	The efficiency of an otto cycle is 60 % and y = 1.4, the compression ratio is
Option A:	2.25
Option B:	4.25
Option C:	5.25
Option D:	6.25
Q5.	The compression ratio of the petrol engine is in the range of
Option A:	6 to 8
Option B:	8 to 12
Option C:	16 to 20
Option D:	80 to 22
Q6.	During the Cruising range of Automotive Engine which type of A/F mixture is
	provided
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Option A:	Rich Mixture
Option B:	Strong mixture
Option C:	Lean Mixture
Option D:	Chemically Correct Mixture
Q7.	These are the Phases of combustion in SI Engine
Option A:	Ignition Lag Flame propagation, Ignition Delay
Option B:	Ignition Lag, Before Burning, After Burning
Option C:	Ignition Lag, Flame Propagation, after burning
Option D:	Ignition Lag, Afterburning
Q8.	The process of formation of a combustible fuel-air mixture by mixing the proper
	amount of fuel with air before admission to engine cylinder is called carburetion
	and the device which does this job is called a
Option A:	Carburetor
Option B:	Injector
Option C:	Piston
Option D:	Combustion Chamber
Q9.	If mf= 0.5 Kg/min, Cf= 0.6, ρ f=750, ∇ pf= 0.07 then diameter (df) is
Option A:	2.15 mm
Option B:	2.35 mm
Option C:	4.55 mm
Option D:	5.15 mm
Q10.	The reference fuels for knock rating of spark ignition engines would include
Option A:	Iso-octane and alpha-methyl naphthalene
Option B:	Normal octane and aniline
Option C:	Iso-octane and normal hexane
Option D:	Normal neptane and iso-octane
011.	Fuel Injection pressure in solid injection system is around
Option A:	200-250 bar
Option B:	10-20 bar
Option C:	35-50 bar
Option D:	20-25 bar
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Q12.	In CI engine with increase in compression ratio the delay period
Option A:	First increase then decrease
Option B:	Decreases
Option C:	Increases
Option D:	Not Affected

Q13.	Knocking takes place in CI Engine
Option A:	Before compression
Option B:	During compression
Option C:	At the end of combustion
Option D:	At the start of combustion
Q14.	In CI engines fuel is injected into the combustion chamber at about 15°C
	TDC during compression stroke
Option A:	after
Option B:	before
Option C:	at
Option D:	at the end of
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Q15.	Detergents are oil additives used to
Option A:	Prevent sludge formation
Option B:	Increase fire point
Option C:	Prevent foaming
Option D:	Reduce viscosity
Q16.	Volumetric efficiency of supercharged engine
Option A:	Between 80-90%
Option B:	Between 900-100%
Option C:	Between 100-110%
Option D:	Between 70-80%
Q17.	Cooling after compression is necessary to
Option A:	Increase the inlet water temperature
Option B:	Increase Exhaust Temperature
Option C:	Increase the density of air
Option D:	Increase Air fuel ratio
Q18.	Supercharger is
Option A:	Exhaust driven
Option B:	air driven
Option C:	crank driven
Option D:	motor driven
Q19.	Turbocharging increases the of the engine
Option A:	Thermal efficiency
Option B:	Volumetric efficiency
Option C:	Overall efficiency
Option D:	Mechanical efficiency
Q20.	Liquefied Petroleum Gas is also known as
Option A:	Propane

Option B:	Helium
Option C:	Argon
Option D:	Florine
Q21.	Frictional Power can be calculated as
Option A:	Indicated Power + Brake Power
Option B:	Brake Power + Indicated Power
Option C:	Brake Power – Indicated Power
Option D:	Indicated Power – Brake Power
Q22.	Which method is used to calculate Friction Power
Option A:	Eddy current dynamometer
Option B:	William's line method
Option C:	Engine Indicator Instrument
Option D:	Rope brake dynamometer
Q23.	If pmi = 6 bar, N= 1000 rpm, D= 110 mm, L= 140 mm then IP= ?
Option A:	10.3
Option B:	13.3
Option C:	9.3
Option D:	15.3
Q24.	In which engine rich mixture is provided near spark plug
Option A:	Free-piston engine
Option B:	Wankel engine
Option C:	Stratified charge engine
Option D:	Stirling engine
Q25.	Any vehicle that runs on Diesel fuel is compatible with how much % blend of
	Biodiesel fuel
Option A:	10% - 20%
Option B:	30% - 40%
Option C:	40% - 45%
Option D:	45% - 50%