QUESTION BANK

Title of the Subject: Basic Civil and Mechanical Engineering	
Title of the Unit: Basic mechanical engg	**Unit No:- 1**

Multiple Choice Questions		
Question No.	**Question Description**	**Expected Marks**
1	Thermodynamics deals with a]Sound, b]Energy , c] Smell , d] Speed	**1**
2	Force is proportional to A] Mass x speed, b] Mass x weight, c] Mass X acceleration , d] Mass X volume	**1**
3	Force per unit area represents A] Power , b] Energy ,c] Pressure , d] Impact	**1**
4	Two stroke and four stroke are classifications of A] Steam engine, b] Cryo engine , c] Internal combustion engine, d] None of the above	**1**
5	Bore, stroke, volume and clearances is the terminology of A] IC engine , b] Machine, c] Storage tank, d] Gas plant	**1**
6	Plant , grass, cow dung and human waste are useful in in making A]Fuel pallets, b] bio gas , c] village huts , d] All of the above	**1**
7	Coal and air circuit , cooling water circuit are the components of A] Nuclear power plant , b] Thermal power plant , c] Solar power plant , d] Tidal power plant	**1**
8	Uranium and Plutonium are used as fuel in A] Nuclear power plant , b] Thermal power plant , c] Gas power plant , d] hydal power plant	**1**
9	Mixing air and petrol in desired quantity is done with A] Silencer , b] Carburetor, c] Cylinder , d] Gear box	**1**
10	Automobile engines are used in A] Two wheelers , b]Three wheelers , C] Four wheeler , d] All of above	**1**

Short Answer Question1		
Question No.	**Question Description**	**Expected Marks**
1	What does a mechanical engineer do?	**2**
2	What are main streams in mechanical engineering?	**2**
3	What is definition of thermodynamics?	**2**
4	List out laws of thermodynamics	**2**
5	What is a heat engine?	**2**
6	Define I C Engine and E C engine.	**2**
7	Classify I C engines.	**2**
8	List out important parts of I C engine.	**2**
9	What is apower plant	**2**
10	What are fuels used in various power types of power plant?	**2**
11	What is an automobile?	**2**

Long Answer Question		
Question No.	**Question Description**	**Expected Marks**
1	Explain in brief laws of thermodynamics and give example for each.	**8**
2	Explain working of 2 stroke and 4 stroke engine.	**8**
3	Explain difference between petrol and diesel engine.	**8**
4	Explain with neat sketch working of Thermal power plant and give its advantages and limitations.	**8**
5	Explain with neat sketch working of gas power plant and give its advantages and limitations.	**8**
6	Explain with neat sketch working of nuclear power plant and give its advantages and limitations.	**8**
7	What is an Automobile and what are its various categories?	**8**

8	What are main systems of Automobiles?	**8**
9	What are applications of Automobiles?	**8**
10	What is emission from automobile and how it affects environment	**8**

Title of the Unit: Basic mechanical engg	**Unit No:- 2**

Multiple Choice Questions		
Question No.	**Question Description**	**Expected Marks**
1	Ratio of stress to strain is known as (a)safety ratio(b)force ratio(c)power module(d)young's modulus	**1**
2	Ability of material to resist without rupture is called (a)fracture(b)strength(c)shear(d)wear	**1**
3	Degree of freedom is related with (a)Engines(b)equipments(c)mechanisms(d)objects	**1**
4	The ratio of failure stress to allowable stress is known as (a)safety ratio(b)safety zone(c)factor of safety(d)factor of strength	**1**
5	Two metal plates can be joined by (a)nut and bolt(b)welding(c)riveting(d)all of the given	**1**
6	In engine design wood cork and leather are used as (a)decorative materia(b)strong material(c)friction material(d)none of the given	**1**
7	Generally round components are machined on (a)heavy cutter(b)lathe(c)shaper(d)round cutter	**1**
8	Drilling machine is used for making (a)circular hole(b)flat surface(c)design(d)slots	**1**

9	Metal casting is done in (a)machine shop(b)foundary(c)rolling shop(d)none of the given	**1**
10	Ferrous and non ferrous are the types of (a)metals(b)alloys(c)parts(d)all of the given	**1**

Short Answer Question		
Question No.	**Question Description**	**Expected Marks**
1	Draw strain strain diagram for ductile and brittle material.	**2**
2	What are the basic stresses in mechanical design?	**2**
3	Write names of ten different types of materials with their applications.	**2**
4	Draw neat and clean sketches of nut, bolt and rivet.	**2**
5	What do you mean by machining and machinability.	**2**
6	What is the use of lathe machine.	**2**
7	What is the use of milling machine.	**2**
8	What is the use of shaper.	**2**
9	What is the use of drilling machine.	**2**
10	What are the different casting defects.	**2**

Long Answer Question		
Question No.	**Question Description**	**Expected Marks**
1	Explain various mechanical properties of material.	**8**
2	What is the importance of standards in mechanical design ? What are they ?	**8**
3	Write about advance materials and their applications. of various fasteners.	**8**

4	Write about applications of various fasteners.	**8**
5	Explain the terms machining and machinability.	**8**
6	Explain the working principle of lathe machine with neat and clean diagram.	**8**
7	Explain the working principle of milling machine with neat and clean diagram.	**8**
8	Explain the working principle of shaper machine with neat and clean diagram.	**8**
9	Explain the working principle of drilling machine with neat and clean diagram.	**8**
10	Explain the procedure of metal casting in a foundry.	**8**