SL.NO:1305 **SUBJECT CODE:17ARSE46**

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E./ B.TECH DEGREE EXAMINATIONS- FEB -2022
AERONAUTICAL ENGINEERING

AIRCRAFT MATERIALS AND PROCESSES

Time : Three Hours Maximum Marks:100 Marks

Answer **ALL** questions

Part-A (10 x 2 =20 Marks)

1 Define phase.
2 Define the tern slip.
3 Tell how corrosion can be prevented.
4 Discuss why powder metallurgy is preferred over other manufacturing methods.
5 List reinforcement matrix materials in ceramic composite materials.
6 Discuss about crystal lattice.
7 Discuss how you can specify steel.
8 Discuss the term by season cracking of brass.
9 Define the term by compaction.
10 Discuss super alloys used in aircraft materials.

Answer **Any FIVE** questions

Part-B (5 x10 =50 Marks)

11 a. Define fatigue failure. How fatigue test is carried out with detail explanation.

OR

b. Describe in detail about non destructive testing methods used in aircraft industries.

12 a. Describe in detail about erosion corrosion & pitting corrosion.

OR

b. Explain the application of composite materials in various industries.

13 a. Explain Mechanical Properties and the Application of Superalloys.

OR

b. Describe in detail the procedure to draw miller indices for crystal planes and directions.

14 a. Discuss in detail about edge location with suitable sketches.

OR

b. Discuss about the micro-constituents of iron-carbon alloys. Explain the general characteristics of each.

p.t.o

15 a. List the properties and typical application of the following
(i). PVC (ii). PEEK

OR

b. Describe why material testing is necessary for aircraft industries. Explain in detail of any two testing methods.

16 a. Enumerate in detail about the mechanism of corrosion.

OR

b. Enumerate in detail about tempering process of heat treatment. .

17 a. Discuss the term (i) Blending (ii) Sintering.

OR

b. List the defects occurred in powder metallurgy components and explain any two of them.

18 a. Discuss the factors affecting creep.

OR

b. Determine the selection of Superalloys based on high temperature application.

Answer ALL questions

PART-C (2 x 15 = 30)

19 a. Describe any one manufacturing methods of metal matrix composites.

OR

b. Describe in details about different types of crystal structures with suitable illustration**.**

20 a. List out the types of ceramic materials briefly explain with application.

OR

b. Describe in detail about Modern Superalloys with applications

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SL.NO:1305

SL.NO:1119 **SUBJECT CODE:17PHBS05**

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E./ B.TECH DEGREE EXAMINATIONS- FEB -2022
COMMON TO ALL

SMART MATERIALS

Time : Three Hours Maximum Marks:100 Marks

Answer **ALL** questions

Part-A (10 x 2 =20 Marks)

1 Demonstrate, how the Metallic glasses can be used for transformer core materials?

2 Explain briefly about transformation temperature in SMA.

3 Distinguish between Type I and Type II Superconductors.

4 Interpret unit cell.

5 Demonstrate top-down and bottom-up approach for producing nanoparticles.

6 Interpret any two techniques for the synthesis of nanophase materials.

7 Explain briefly about top-down approach.

8 Describe coercivity and retentivity.

9 Explain briefly about soft magnetic materials.

10 Identify the reason, why the superconductor exhibits the property of diamagnetism?

Answer **Any FIVE** questions

Part-B (5 x10 =50 Marks)

11 a. Categorize metallic glasses? Give examples. Mention the properties of metallic glasses.

OR

b. Draw the unit cells of SC, BCC, FCC and HCP structures

12 a. Examine the effects of temperature, magnetic field and current on the superconductivity.

OR

b. Schedule the following for SC, BCC, FCC and HCP structures

13 a. Explain the properties of diamagnetic materials with neat diagram.

OR

b. Explain two characteristics of SMA with neat diagrams.

14 a. Explain the properties of Ni-Ti alloy.

p.t.o

OR

b. Express the outline of magnetic and electrical properties of metallic glasses. Mention any two applications of metallic glasses.

15 a. Describe the following (i) unit cell (ii) coordination number (iii) nearest neighbour distance (iv) packing factor

OR

b. Explain the advantages, disadvantages and applications of ball milling method.

16 a. Explain Carbon Nano Tubes? How are they classified? Explain.

OR

b. Explain in detail about any one of the methods of fabrication of CNT.

17 a. Differentiate the properties of dia, para and ferromagnetic materials

OR

b. Discuss the properties of superconductors.

18 a. Describe about Type – I super conductor. Write down its characteristics.

OR

b. Discuss Isotope Effect and Meissner effect.

Answer ALL questions

PART-C (2 x 15 = 30)

19 a. Categorize hard and soft magnetic materials? Mention their applications.

OR

b. Generalize the properties of metallic glasses.

20 a. Illustrate sol-gel method of preparing nanophase materials and mention its advantages.

OR

b. Illustrate hysteresis on the basis of domain theory.

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S.No.1118 **SUB CODE:17PCBS02**

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E.DEGREE EXAMINATIONS- FEB - 2022
COMMON TO ALL
PHYSICAL SCIENCES

(Candidates admitted under 2017 Regulations-SCBCS)

Time : 1 1/2 Hours Maximum Marks:50 Marks

PART A - ENGINEERING PHYSICS

Answer **ALL** questions

Part-A (5 x 2 =10 Marks)

1 Tell about population inversion.
2 Schedule any two applications of laser in industrial field.
3 Report about step index fiber.
4 Tell about the characteristics of graded index multimode fiber.
5 Interpret about X-ray Fluoroscopy.

Answer **Any FIVE** questions

Part-B (2 x12 =24 Marks)

6 a. Predict the applications of laser in communication, military and chemical fields.

OR

b. Recognize the following terms: population inversion, pumping process and laser action.

7 a. Express the various types of fibers based on refractive index profile.

OR

b. Express the characteristics of penetrant.

Answer ALL questions

PART-C (1 x 16 = 16)

8 a. Demonstrate the construction and working of semiconductor laser with necessary diagram.

OR

b. Illustrate the working of X-ray radiography.

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P.T.O

PART A - ENGINEERING CHEMISTRY

(Candidates admitted under 2017 Regulations-SCBCS)

Time : 1 1/2 Hours Maximum Marks:50 Marks

Answer **ALL** questions

Part-A (5 x 2 =10 Marks)

1 Brief the terms electrolytic and electrochemical cell.
2 What is helmholtz's electrical double layer?
3 Show the structure of EDTA and Ca-EDTA complex.
4 Mention the causes of boiler corrosion
5 Write a note on solar energy

Answer **Any FIVE** questions

Part-B (2 x12 =24 Marks)

6 a. Explain standard electrode potential in detail.

OR

b. Calculate the emf of the cell Mg/Mg^{2+} $//Cd^{2+}$ (aq) /Cd(s) at 25^0C where, $[Cd^{2+}]$=0.7M, $[Mg^{2+}]$ =1.0M and E^0cell =1.97 V.

7 a. Discuss in detail dry corrosion with mechanism.

OR

b. Describe producer gas in detail.

Answer ALL questions

PART-C (1 x 16 = 16)

8 a. Explain the working principle of H_2-O_2 fuel cell with reactions.

OR

b. Elaborate the non-conventional energy sources.

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S.No.1118

S.No.B -5029 **SUBJECT CODE: 17ARE202**

VINAYAKA MISSION'S RESEARCH FOUNDATION
(Deemed to be University)
B.ARCH- DEGREE EXAMINATIONS- FEB-2022
ELECTIVE - VERNACULAR ARCHITECTURE

(Candidates admitted under 2017 Regulations-SCBCS)

Time : Three Hours Maximum Marks:100 Marks

Part-A (10 x 2 =20 Marks)
Answer **ALL** questions

1 Explain the term Vernacular Architecture according to R.W. Brunskill.
2 What is Vernacular Architecture?
3 List the different approaches to vernacular architecture.
4 What are the design elements of Vernacular Architecture?
5 Write short notes on Forms & Structures used in Desert West buildings.
6 What are the kinds of plaster techniques used in olden Indian Villages?
7 Write a few characteristic building elements of wooden houses in Kerala.
8 Explain few building elements of Chettinadu houses.
9 Sketch a Rural Bengal house along with peasant's dwelling house.
10 What is the roofing techniques practiced in olden Vernacular buildings?

Part-B (5 x 10 =50 Marks)
Answer **AnyFive** questions

11 Explain the Vernacular Architecture of Hama the city of Water wheels and Moroccon Desert fortress.
12 Explain the Vernacular architectural aspects of Buddhist buildings of India.
13 Explain the Advantage of Climatology in Vernacular Architecture.
14 Explain the vernacular architecture of Western desert region.
15 Explain the characteristic features of houses around Jaisalmer town.
16 What do you understand by the term Koothambalam sketch and explain.
17 Explain the features of colonial buildings of Kerala &Tamilnadu.
18 What do you understand by the French influences in planning of the settlements in Pondicherry?

Part-C (2 x 15 =30 Marks)
Answer **All** questions

19.a Explain the systematic Vernacular Architecture study with the Extensive and Intensive recordings.

OR

.b With neat sketches explain how construction materials and technology as modifying factors in the fabrication of Vernacular Architecture state its relevance with Indian Context.

20.a Describe the features of Rajasthani fortified towns of their buildings.

OR

.b Explain briefly about the early settlements of Bengal and how the Bungalow plan had its Open planning impact.

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S.No.B-5019 **SUBJECT CODE: 17AR710**

VINAYAKA MISSION'S RESEARCH FOUNDATION
(Deemed to be University)
B.ARCH- DEGREE EXAMINATIONS- FEB-2022

ESTIMATION, QUANTITY SURVEYING AND SPECIFICATION

(Candidates admitted under 2017 Regulations-SCBCS)

Hours Maximum Marks:100 Marks

Part-A (10 x 2 =20 Marks)
Answer **ALL** questions

1 What is schedule of rates?
2 What is standard specification?
3 Define Estimation.
4 Write a short note on contingency.
5 What is priced bill quanities?
6 Define layout plan.
7 What is market value?
8 What is book value?
9 What is the purpose of budgeting?
10 What is master budget?

Part-B (5 x 10 =50 Marks)
Answer **AnyFive** questions

11 Draw the flow chart for relation with working drawing with specification
12 Explain the general specifcations of second class building
13 Prepare the rough estimate for a proposed commerical complex for following data
Plinth area = 500 m^2/floor; Ht. of each storey = 3.5m; No. of Storeys = G+2; Cubical content rate = Rs. 1000/m^3
Provided for the floowing of structured cost
a) water supply & sanitary arrangements - 8%
b) Electrification - 6%
c) Fluctuation of rates - 5%
d) contractors profit - 10%
e) petty supervision & contingencies - 3%

14 Compare the detailed & abstract estimate
15 Explain any two types estimate.
16 Explain the basic principles of valuation.
17 Describe the steps involved in budgeting process.
18 Explain the mertis and demertis of budgeting

Part-C (2 x 15 =30 Marks)
Answer **All** questions

19.a Describe the detailed specifications of cement concrete in foundation.

OR

.b What are the different types of estimates? Explain briefly.

20.a Prepare a detailed estimate of a wall of the building
Foundations concrete L.C; 2) Foundation of plinth of first class bricks L.M; 3) D.P.C of 2.5cm; 4) Superstructure of 1st class bricks L.M; 5) wall finishing – Inside wall – 12mm finished with 3 coats of white washing & Outside wall 10 cm below the ground level finished with coats of color washing . Refer Fig 3.

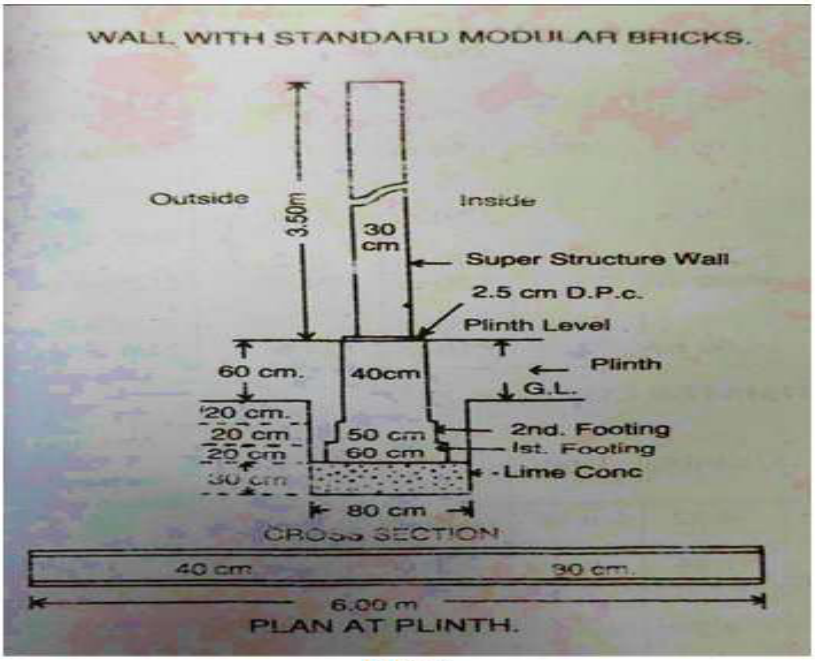

FIG. 3

OR

.b Prepare a cash flow statement for a XZY construction company

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S.No.B -5024 **SUBJECT CODE: 17ARE203**

VINAYAKA MISSION'S RESEARCH FOUNDATION
(Deemed to be University)
B.ARCH- DEGREE EXAMINATIONS- FEB-2022
ELECTIVE - ENERGY EFFICIENT ARCHITECTURE

(Candidates admitted under 2017 Regulations-SCBCS)

Time : Three Hours Maximum Marks:100 Marks

Part-A (10 x 2 =20 Marks)
Answer **ALL** questions

1 Explain Evaporative cooling.
2 Explain the concept of Evaporative cooling
3 Explain the Types of shading with sketches.
4 Give any four building examples to suit climate.
5 Give any two examples of mechanical devices to control heat in buildings
6 Differentiate between external, internal and ventilation load of heat gain or loss in a building.
7 Name any 4 Passive cooling techniques.
8 Define non renewable energy source.
9 Explain salient features of green building
10 Write short note on energy conservation building code.

Part-B (5 x 10 =50 Marks)
Answer **AnyFive** questions

11 Explain in detail the various passive effects of a courtyard in a building with technical sketches.
12 Explain Earth Sheltred structure.
13 Enumerate the general principles of passive solar heating along with key elements
14 How can buildings reduce energy consumption?
15 Discuss the concepts of Green Buildings
16 Discuss the various forms of energy and energy scenario in India
17 Discuss in detail Earth coupling and Earth air pipe system?
18 Explain any five green building materials.

Part-C (2 x 15 =30 Marks)
Answer **All** questions

19.a Explain Roof sprays, Roof ponding and Roof radiation Trap with sketches.

OR

.b Illustrate a traditional and a modern building in any climate zone known to you and explain the Energy Efficient features adopted in both.

20.a What are the design guidelines to be adopted for making a building site: a)Warmer. b) Cooler.

OR

.b Enumerate design principles for ‘Energy Efficient Buildings’of various zones with examples

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S.No.B -5027 **SUBJECT CODE: 17ARE601**

VINAYAKA MISSION'S RESEARCH FOUNDATION
(Deemed to be University)
B.ARCH- DEGREE EXAMINATIONS- FEB-2022
ELECTIVE - ARCHITECTURAL CONSERVATION

(Candidates admitted under 2017 Regulations-SCBCS)

Time : Three Hours Maximum Marks:100 Marks

Part-A (10 x 2 =20 Marks)
Answer **ALL** questions

1 Define Conservation.
2 What is ICCROM - Explain.
3 What is architectural conservation?
4 What is ASI and their activities?
5 What seismic retrofit?
6 What is replication in conservation?
7 What is listing of monuments?
8 What is architectural character in monuments?
9 What is historic district?
10 What is heritage precinct?

Part-B (5 x 10 =50 Marks)
Answer **AnyFive** questions

11 Explain about the international agencies and their role in architectural conservation.

12 Explain in detail about the ethical principles of preservation and conservation.

13 Explain in detail about urban conservation.
14 Explain briefly about Inventory, Listing and Documentation.
15 What are the natural factors causing damage to the buildings?
16 How historic significance of a building is inflencing a structure to be a monument,Give example and explain.
17 Explain the role of architects in conservation.
18 Explain how culture, tradition and practices influence the heritage tourism.

Part-C (2 x 15 =30 Marks)
Answer **All** questions

19.a Explain History of heritage conservation movement and the need, purpose and debate for the same.

OR

(P.T.O)

.b Explain in detail about the objectives procedures for conservation.

20.a Explain in detail about the Repair methods in conservation both traditional and modern methods.

OR

.b Explain in detail about a historic town and their history,features and the procedure for conservation of the town.

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S.No.B -5027

S.No.B-5018 **SUBJECT CODE: 17AR530**

VINAYAKA MISSION'S RESEARCH FOUNDATION
(Deemed to be University)
B.ARCH- DEGREE EXAMINATIONS- FEB-2022
DESIGN OF STRUCTURES – II

(Candidates admitted under 2017 Regulations-SCBCS)

Time : Three Hours Maximum Marks:100 Marks

Part-A (10 x 2 =20 Marks)
Answer **ALL** questions

1 Write a short note on limit state of durability.
2 What is the main concept of Elastic method?
3 Define characteristic strength and characteristic load in limit state method.
4 Draw yield line pattern for one way slab with simply supported edge conditions
5 Name the type of reinforcements provided in one way slabs
6 Name four parameters which determine the effective widths of T and L-beams.
7 How will you determine the neutral axis depth of a R.C.C.beam ?
8 What are the types of beam based on the structural application?
9 Write down the expression for minimum eccentricity?
10 On which circumstances combined rectangular footing are suitable?

Part-B (5 x 10 =50 Marks)
Answer **AnyFive** questions

11 What are the advantages of Limit state method?
12 Differentiate between working stress method and limit state method
13 Design a one way slab for the following data: Size = 3m x 9m, Width of the supports = 230 mm, live load = 3 kN/m^2, floor finish = 1 kN/m^2. Use M20 concrete and Fe415 steel.
14 Calculate the ultimate moment of resistance of a singly reinforced T beam having flange width of 1200 mm, flange thickness of 120 mm and rib width of 300 mm. The beam is reinforced with 8 numbers of 25 mm diameter Fe415 steel bars. The grade of concrete is M20
15 Design a simply supported RC beam having an effective span of 5m.the beam has to carry a load of 25 kN/m. sketch the reinforcement details.
16 A rectangular reinforced concrete column of cross sectional dimension 450 mm x 600 mm is subjected to an axial load of 2200 kN under service dead and live loads. The column has an unsupported length of 3 m. Adopt M20 grade concrete and Fe415 HYSD bars. Design the column.
17 Design the longitudinal reinforcement in a short column 400 mm x 600 mm subjected to an ultimate axial load of 1600 KN together with ultimate moments of 120 kNm and 90 kNm about the major and minor axis respectively. The reinforcement are distributed equally on all four sides. Adopt M20 grade concrete and Fe415 steel bars.

18 Design a square footing a square column of side 230 mm, to carry a factored axial load of 750 kN. The ultimate bearing capacity of soil is 150 kN/m2. Use M20 concrete and Fe415 steel bars. Check the safety of footing against punching shear

Part-C (2 x 15 =30 Marks)

Answer **All** questions

19.a What are the structural materials used for different types of buildings? Discuss in detail about any 4 building materials.

(P.T.O)

OR

.b Design one of the flights of a dog legged stairs spanning between landing beams using the following data:• Type of staircase: dog legged with waist slab, treads and risers

- Number of steps in the flight=10
- Rise R=150mm
- Tread T=300mm
- Width of landing beams=300mm
- M20 grade concrete and Fe415 steel.

20.a A T-beam has the following data: width of the flange = 750 mm breadth of beam = 250 mm; Effective depth = 500 mm; Thickness of flange = 90 mm. Applied moment =130 kNm. Design the beam using M20 concrete and Fe-415 grade steel.

OR

.b A circular RC column is subjected to an ultimate axial force of 1500 KN and ultimate biaxial bending moment of 200 kNm in x direction and 150 kNm in y direction. Use M30 concrete and Fe415 grade steel. Effective length of the column is 3.3 m.

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SL.NO:1048 **SUBJECT CODE:17ARPI03**

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E./ B.TECH DEGREE EXAMINATIONS- FEB-2022
AERONAUTICAL ENGINEERING

ELECTIVE - INTRODUCTION TO AIRCRAFT INDUSTRY AND AIRCRAFT SYSTEMS

Time : Three Hours Maximum Marks:100 Marks

Answer **ALL** questions

Part-A (10 x 2 =20 Marks)

1 What is the role of DGCA in India?

2 What is an aeroplane?

3 What is the purpose of booster pump in fuel system?

4 How does viscosity of oil affect the system?

5 What is the importance of monitoring cylinder head temperature?

6 Who is the present owner of Air India?

7 What is elevator?

8 Classify the types of landing gears.

9 List the types of gas turbine.

10 Expand AVGAS.

Answer **Any FIVE** questions

Part-B (5 x10 =50 Marks)

11 a. Explain the Aviation regulatory bodies of India.

OR

b. Illustrate the association of aircraft operators in international levels.

12 a. Apply the concept and illustrate airworthiness of an aircraft? Explain in detail.

OR

b. Demonstrate the working of Ministry of Civil Aviation, Govt. of India.

13 a. Demonstrate the working of all three primary controls of an aircraft.

OR

b. Explain the properties of undercarriage.

(p.t.o)

14 a. Apply Newton's Laws of motion to explain thrust force.

OR

b. Illustrate the working principle of turboshaft engine and explain its use.

15 a. Explain the working of air intake and its importance in ramjet engine.

OR

b. Explain subsonic and supersonic speed regimes.

16 a. Compare the types of cooling systems used in a piston engine.

OR

b. Categorize and explain in detail about air cooling.

17 a. Explain the purpose of propeller with a neat sketch.

OR

b. Draw a neat sketch of jet engine and label the parts and components and explain compressor and turbine.

18 a. Illustrate the process of combustion in a jet engine and types of combustors.

OR

b. Illustrate drag force and explain how it opposes thrust force.

Answer ALL questions

PART-C (2 x 15 = 30)

19 a. Appraise the efforts made by Wright brothers in making a powered flying machine.

OR

b. Evaluate with neat sketch, the working principle of turboprop engine.

20 a. Assess the use of thermodynamic principles in designing the aerengines.

OR

b. Evaluate the various types of motion - roll, pitch and yaw with respect to an aircraft.

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S.No.B -5026 **SUBJECT CODE: 17ARE501**

VINAYAKA MISSION'S RESEARCH FOUNDATION
(Deemed to be University)
B.ARCH- DEGREE EXAMINATIONS- FEB -2022
ELECTIVE - REAL ESTATE AND VALUATION

(Candidates admitted under 2017 Regulations-SCBCS)

Hours Maximum Marks:100 Marks

Part-A (10 x 2 =20 Marks)
Answer **ALL** questions

1 Define the following terms.
a) Miniperm
b)Accrue

2 Define the following terms.
a) Equity
b)Estoppel Certificate

3 Write about site analysis in feasibility study.

4 What is the difference between project finance and traditional finance?

5 What is Integrating CREAM to core business strategy?

6 List the Service Installations.

7 What is corporate real estate ?

8 Write about the impact of technological change on CRE operations.

9 Write about Factors affecting Unit Rate of Land in Project Appraisal.

10 What are the Factors affecting Unit Rate of Land

Part-B (5 x 10 =50 Marks)
Answer **AnyFive** questions

11 Explain briefly about different types of property.

12 Write about the Components of the feasibility study.

13 Write about Organizational/Managerial Feasibility.

14 How to Provide & Manage the Working Environment? explain with the flow chart.

15 Write in detail about the Land Acquisition and Rehabilitation and Resettlement Bill (LARR), 2011

16 Write in detail about the various stages of Evaluations: Strategic to in-depth

17 Write about the Factors contributing to culture of place.

18 Write in detail about the Fundamentals of Real Estate Appraisal/Valuation

(P.T.O)

Part-C (2 x 15 =30 Marks)

Answer **All** questions

19.a What are the differnt types of Major Construction.

OR

.b What are the typical steps in project finance along with the flow chart?

20.a Write in detail about the Urban planning policy.

OR

.b Write in detail about the Valuation of properties situated in coastal regulation zones

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S.No.B -5026

SL.NO:1020 **SUBJECT CODE:17ARSE34**

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E./ B.TECH DEGREE EXAMINATIONS-FEB - 2022
AERONAUTICAL ENGINEERING

ELE-AIRCRAFT GENERAL ENGINEERING MAINTENANCE AND PRACTICE

Time : Three Hours Maximum Marks:100 Marks

Answer **ALL** questions

Part-A (10 x 2 =20 Marks)

1 State what should be the holding power or strength of fixed tie-down anchors for twin- engine aircraft?
2 State what types of corrosives generally come in powder form?
3 State what is the principle of operation of MPI?
4 Summarise the types of tie downs.
5 Describe what is the maximum protrusion allowed for anchor eye above the ground?
6 Describe what is the message given by control tower by flashing white light when towing or taxing an aircraft?
7 Explain what types of corrosives generally come in liquid form?
8 Name various sections of material safety data sheet (MSDS).
9 Explain what do you mean by special inspection?
10 Explain what do you mean by aircraft hardware?

Answer **Any FIVE** questions

Part-B (5 x10 =50 Marks)

11 a. Explain with the sketches the types of threads and their advantages

OR

b. Explain in detail about Non-self locking Nuts and self locking Nuts used in aircrafts.

12 a. Explain in detail about Lock bolts

OR

b. Name the various NDT techniques. Explain MPI.

13 a. Explain hand cranking with precautions to be observed.

OR

b. Explain in detail about Ground support equipments.

14 a. Explain the working of Reciprocating engines.

OR

b. Describe a typical portable oxygen system

15 a. Explain in detail about Air-conditioning distribution system. p.t.o

OR

b. Explain in detail about vapour- cycle cooling systems with a suitable block diagram.

16 a. Describe typical emergency procedures to be followed during handling and storage of combustibles.

OR

b. Discuss what are toxins? Explain various categories of toxins.

17 a. Discuss what are the typical emergency procedures explain detail?

OR

b. Explain with short notes on:
(i) Type certificate data sheets. (ii) Service bulletins

18 a. Discuss the basic inspection techniques and practices

OR

b. Explain the information to be provided in Type Certificate Data Sheets

Answer ALL questions
PART-C (2 x 15 = 30)

19 a. Explain with short notes on:
(i) Special wrenches (ii) Hand Files

OR

b. Explain mooring of an aircraft

20 a. Describe a crew oxygen system

OR

b. Describe the safety aspects of the aero workshop.

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SL.NO:1020

S.No.B-5017 **SUBJECT CODE: 17AR520**

VINAYAKA MISSION'S RESEARCH FOUNDATION
(Deemed to be University)
B.ARCH- DEGREE EXAMINATIONS- FEB-2022
BUILDING SERVICES - II

(Candidates admitted under 2017 Regulations-SCBCS)

Time : Three Hours Maximum Marks:100 Marks

Part-A (10 x 2 =20 Marks)
Answer **ALL** questions

1 What do you meant by reflection and absorption?
2 What do to you meant by grounding?
3 Define Quantum theory.
4 What is light made of?
5 What is energy efficient lighting?
6 Explain Switch boards
7 Define specific lighting.
8 How are Glares produced?
9 What are induction lamps?
10 What are the effects of light on humans with respect to Health?

Part-B (5 x 10 =50 Marks)
Answer **AnyFive** questions

11 Briefly explain the construction and operational details of incandescent lamp with its necessary diagrams.
12 Explain the construction and operational details of Neon lamp with its suitable diagram.
13 How to make the lighting in living room, kitchen and other rooms in a smart building? explain with the necessary diagrams.
14 How to plan the lighting layout for kitchen and living room ? explain
15 Explain the different types of supplementary artificial lighting for buildings.
16 What are Luminaires? Explain their properties in detail.
17 Name the various types of lamps with diagrams.
18 What are OLED & PLEDs ?

Part-C (2 x 15 =30 Marks)
Answer **All** questions

19.a How to prepare the lighting layout for school and theatres? explain

OR

.b How an image is processed in the Human Brain?

20.a Elaborate about Energy efficient Lighting Systems with examples.

OR

.b Design one master bedroom and provide necessary lighting with justifications.

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S.No.B -5023 **SUBJECT CODE:17AR920**

VINAYAKA MISSION'S RESEARCH FOUNDATION
(Deemed to be University)
B.ARCH- DEGREE EXAMINATIONS- FEB -2022
URBAN HUSING

(Candidates admitted under 2017 Regulations-SCBCS)

Hours Maximum Marks:100 Marks

Part-A (10 x 2 =20 Marks)
Answer **ALL** questions

1 Define Social economic factors influencing housing affordability?
2 What is HUDCO
3 What are the Social economic factors influencing housing affordability
4 What is slum upgradation?
5 What is Urban infrastructures and list them out.
6 What is Urban Development Planning System?
7 What are the physical characteristics of site?
8 What are the factors influencing site planning?
9 What are the various tasks in a project development.
10 What are the different types of landscaping elements

Part-B (5 x 10 =50 Marks)
Answer **AnyFive** questions

11 Explain Housing and its importance in Architecture
12 What is neighbourhood city planning?
13 Explain Health principles in Housing in detail.
14 Explain Urban development Planning System in detail in a flow chart
15 Explain standards and regulations of UDPFI.
16 Explain in detail about site planning.
17 Explain in detail about what is required when planning residences in india
18 Explain briefly about housing shortages in india.

Part-C (2 x 15 =30 Marks)
Answer **All** questions

19.a Explain Neighbourhood planning and different concepts in detail with sketches.

OR

.b Explain Rajiv awas yojana in detail

20.a Explain in detail about the Need for UDPFI Guidelines and infrastructural norms and guidelines for an urban area.

OR

.b Explain in detail about various stages and tasks in project development for an housing project with a case study.

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