

ASSIGNMENT 1

B.A./B.Com./B.Sc./B.H.M./B.B.A./B.B.M. DEGREE EXAMINATION, DECEMBER 2020.

First Year

ENGLISH PAPER — I

MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

1. (a) Read the following passage and answer the questions that follow.

Naval architects never claim that a ship is unsinkable, but the sinking of the passenger-and-car ferry Estonia in the Baltic, surely should have never happened. It was well designed and carefully maintained. It carried the proper number of lifeboats. It had been thoroughly inspected the day of its fatal voyage. Yet hours later, the Estonia rolled over and sank in a cold, stormy night. Of those who managed to scramble overboard, only 139 survived. The rest died of hypothermia before the rescuers could get them. The final death toll amounted to 912 souls.

- (i) Where did the ferry sink?
- (ii) Why should the accident never have happened?
- (iii) What was the effect of the accident?
- (iv) What was the passenger-and-care ferry called?
- (v) Give the synonym for, 'fatal'.

- (b) Read the following passage and answer by choosing the right option :

Erosion of America's farmland by wind and water has been a problem since settlers first put the prairies and grassland under the plow in the 19th century. By the 1930's, more than 282 million acres of farmland were damaged by erosion. After 40 years of conservation efforts, soil erosion has accelerated due to new demands placed on the land by heavy crop production. In the years ahead, soil erosion and the pollution problems it causes are likely to replace petroleum scarcity as the nation's most critical natural resource problem.

- (i) As we understand from reading, soil erosion in America ————.
 - (1) causes humans to place more demands on land
 - (2) is worse than it was in the 19th century
 - (3) happens so slowly that it is hardly noticed
 - (4) is the most critical problem that the nation faces
- (ii) Erosion of Farmland's happens by ————.
 - (1) Putting it under the plow
 - (2) Pollution
 - (3) Wind and water
 - (4) Placing new demands on the land

- (iii) The author points out in the passage that erosion in America _____.
 - (1) has become severe and forced people to abandon their settlements
 - (2) occurs only in areas with no vegetation
 - (3) can become a more serious problem in the future
 - (4) was on the decline before 1930's
- (iv) The antonym for "accelerate" is _____.
 - (1) Rapid
 - (2) Slow down
 - (3) Stagnant
 - (4) Stop
- (v) It is pointed out in reading that in America _____.
 - (1) petroleum is causing heavy soil erosion and pollution problems
 - (2) there are many ways to reduce erosion
 - (3) water is undoubtedly the largest cause of erosion
 - (4) soil erosion has been hastened due to overuse of farming lands.

2. (a) Correct the following sentences :

- (i) The small child does whatever his father was done
- (ii) The man to who I sold my house was a cheat
- (iii) Where is the shoes?
- (iv) A laptop was very sophisticated and costly
- (v) They were all shocked at his failure in the competition.

(b) Rewrite as directed :

- (i) They left for the airport. (Add a question tag)
- (ii) Jaya ordered the food. (Change the voice)
- (iii) He said, I did not lie. (Change into indirect speech)
- (iv) Inspite of his hard work, the body didn't succeed. (Change into compound sentence)
- (v) Susan will help you solve the problem. (Change into negative sentence)

(c) Change into direct speech :

- (i) Raju told me he was going to the barber
- (ii) Preethi asked me to pass the salt

(d) Fill in the blanks with correct form of verbs given in the brackets :

- (i) He wants Mary _____ (do) the dishes.
- (ii) Would you mind _____ (open) the window, please?
- (iii) He usually _____ (do) his homework in his room.
- (iv) Let me _____ (leave) the classroom please.

- (v) John ——— (watch) TV every night.
- (e) Fill in the blanks with suitable words given in the end.
- (i) She ——— the job offer.
- (ii) The dog ran ——— the yard.
- (iii) He ——— about his mistake in that test.
- (iv) She ——— and walked away.
- (v) John ——— his friends for a while and then went home.
(yelled, visited, accepted, thought, across)
- (f) Rewrite the following set of jumbled sentences to make a coherent passage.
- (i) He could have practiced law and spent a comfortable life.
- (ii) He was born on 2nd October, 1869
- (iii) He choose to fight the British, for independence.
- (iv) Mohandas Karam Chand Gandhi, popularly known as Mahatma Gandhi.
- (v) He was a lawyer by profession.
- (g) Write three exchanges of dialogue between a person who wants to book a reservation at a hotel and the receptionist there.
- (h) Write a paragraph using the following hints.
Good for young and old – refresh mind – makes us smart and active – light exercise – see nature – birds fly – flowers bloom – ponds – canals – full of water – running water – sweet music – regular walk – enjoy most.
- (i) Write in about 100 words on any ONE of the following.
- (i) The effects of peer pressure.
- (ii) The downside of smart phones.
- (iii) Growing number of people shopping online.
3. Write an essay on following :
- (a) Justify the title, “A sense of the Future”.
- (b) Bring out the humour in George Bernard Shaw’s, “Dilly at the Dentists”.
- (c) Summarize the story of “The Topaz Cufflinks Mystery”.

(DENG 1)

ASSIGNMENT 2

B.A./B.Com./B.Sc./B.H.M./B.B.A./B.B.M. DEGREE EXAMINATION, DECEMBER 2020.

First Year

ENGLISH PAPER — I

MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

1. Write short notes on the following :
 - (a) Write about the comparison of the rose to the lady in the poem “Go Lovely Rose”.
 - (b) What is the central theme of “On killing a Tree”?
 - (c) Summarize the poem, “The Express”.
 - (d) How is the importance of nature brought out in the poem, “Tables Turned”?
 - (e) Justify the title, “Laugh and Be Merry”.
 2. Write an essay on the following :
 - (a) Explain the irony in Karel Capale’s, “The Fortune Teller”.
 - (b) Bring out the appropriateness of the title, “God sees the Truth but waits”.
 - (c) How is Srijut the victim in “The Gold Watch”?
 3. (a) Explain the following :
 - (i) Yes I did, but that “be in London. She is going to stay with me, and then live with the same family”.
 - (ii) You ask, what is our aim? I can answer in one word. It is victory.
 - (iii) ‘I’ve seen wild cats in trees at night and their eyes shine’.
 - (b) Explain the following :
 - (i) Up ! Up ! My friend and clear your looks why all this toil and trouble.
 - (ii) All is, if I have grace to use it so. An ever in my hard task Master’s eye.
-

ASSIGNMENT 1

B.A./B.Com./B.Sc./B.H.M./B.B.A./B.B.M. DEGREE EXAMINATION, DECEMBER 2020.

First Year
Paper I — TELUGU

MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

1. ఈక్రింది వానికి ప్రతిపదార్థ తాత్పర్యము వ్రాయుము.

- (a) కందక గాజావారక వికాసముదప్పుక మందహాసని
వ్యందము చెక్కుటద్దముల జాఱక నెమ్మది నిద్రపావున
ట్లందము నొందె ధాత్రి సిరియాళ కుమారుని వక్షచంద్రుడా
నందము నొందె నప్పుడెల నాగ మనంబును భర్తచిత్తములన్
- (b) నెట్టిన యిట్టి యల్కమది నిల్పితి రెక్కన తాల్మిబిబ్బొడిం
గట్టిన యట్లు పెద్దయును గాలము దీనికి నాట తెన్నడుం
బుట్టదు దుష్టనిగ్రహము పూని జగంబులు కాచునట్టి తో
బుట్టువు నీవు తేజమున బొల్పిన భర్తలు గల్గ నచ్యుతా

2. ఈక్రిందివానికి సందర్భసహిత వ్యాఖ్యలు వ్రాయుము.

‘అ’ భాగం

- (a) ఎల్లవారికి దుఃఖమిట్టిదకాదె
- (b) పోటున కిచ్చగింతురొ కొపోదురో కానలనుండి నచ్యుతా
- (c) ఏమి గతి వేగుదు మెక్కడ జొత్తు చెప్పుమా
- (d) పాలు వోయింపు డమ్మ పాపనికి ననియె

‘ఆ’ భాగం

- (a) వొట్టిమాటలు కట్టిపెట్టోయ్ గట్టిమేల్ తలపెట్టవోయ్
- (b) ఎంత నిర్మలమోము నీ హృదయ కళిక
- (c) ఆనపెట్టితివేని అడుగుదాటనులేర
- (d) ప్రపంచమునకు భోజనము పెట్టువానికి భుక్తి లేదు

3. క్రిందివానికి వ్యాసరూప సమాధానము వ్రాయుము.

‘అ’భాగం

- (a) బెజ్జమహాదేవి శివుని సేవించిన విధమును వివరింపుము.
- (b) ద్రౌపది తన భంగపాటును శ్రీకృష్ణునకు చెప్పిన విధమును వివరింపుము.

‘ఆ’భాగం

- (a) ఎఱ్ఱున కవితారీతులను వివరింపుము.
- (b) చిరుతొండనంబి ముక్తిని పొందిన విధమును వివరింపుము.

ASSIGNMENT 2

B.A./B.Com./B.Sc./B.H.M./B.B.A./B.B.M. DEGREE EXAMINATION, DECEMBER 2020.

First Year
Paper I — TELUGU

MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

1. ఈక్రిందివానికి సమాధానములు వ్రాయుము.

‘అ’భాగం

- (a) గురజాడకు గల దేశాభిమానమును వివరింపుము.
- (b) కృషీవులుని జీవిత స్వభావాలను వివరింపుము.

‘ఆ’భాగం

- (a) ‘గబ్బిలం’ లో జాషువాగారు పేర్కొన్న అరుంధతీ సుతుని వృత్తాంతమును వివరింపుము.
- (b) పెన్నేటి పాట ఆధారంగా రాయలసీమ దుస్థితిని వివరింపుము.

2. ఈక్రిందివానికి సమాధానాలు వ్రాయుము.

- (a) నవలా లక్షణములు కాలాతీత వ్యక్తులతో సమన్వయింపుము.
- (b) చక్రవర్తి పాత్రను వివరింపుము.
- (c) ఆనందరావు పాత్రలోని ప్రత్యేకతను వివరింపుము.
- (d) కాలాతీత వ్యక్తులు నవల ద్వారా రచయిత్రీ శ్రీదేవి సమాజానికి ఇచ్చిన సందేశము.

3. ఈక్రిందివానిని విడదీసి సంధికార్యములు వ్రాయుము.

- (a) చింతాక్రాంత
- (b) ధర్మేతర
- (c) తేజోరూపము
- (d) ప్రత్యుత్తరము
- (e) పోడిమిసేయు
- (f) లేకది
- (g) కృపాయత్త
- (h) అచ్చోట
- (i) ఇంతలంతలు
- (j) అన్నదమ్ములు

4. ఈక్రిందివానికి విగ్రహవాక్యములు వ్రాసి సమాసములు వివరింపుము.

- (a) తైలోక్యపతి
 - (b) ముల్లోకములు
 - (c) కఱకంఠుడు
 - (d) చక్రధారి
 - (e) జనపతి
 - (f) పెనుగద
 - (g) గృహకృత్యములు
 - (h) వనజాక్షుడు
 - (i) హరవిలాసము
 - (j) ఇరుగుపొరుగులు
-

(DSAN 1 (NR))

ASSIGNMENT 1

B.A./B.Com./B.Sc./B.H.M./B.B.A./B.B.M. DEGREE EXAMINATION, DECEMBER 2020.

First Year

SANSKRIT PAPER – I (NR)

MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

1. (a) Write the significance of the Ramayana in 10 lines.
रामायणस्यावतरणमधिकृत्य दश वाक्यानि लिखत ?
(b) Explain the qualities of scholars as described by Noble Vidura.
विदुरनीतौ प्रतिपादीतानि पण्डित लक्षणानि विवृणुत ?
2. (a) Write the words uttered by celestial bachelor with Parvathi who was performing Penance.
तपश्चरन्तीं पार्वतीं प्रति जटिलस्य वचनानि लिखत ?
(b) Explain the help rendered by Rajavahana to Brahmin.
राजवाहनकृतां द्विजोपकृतीं विशदयत ?
3. (a) Describe the six seasons as prescribed in the lesson.
पाठ्यभागमनुसृत्य षट्तून् वर्णयत ?
(b) Write the story of intelligent Rabbit.
मचतुरशशकःफइति कथां लिखत ?

(DSAN 1 (NR))

ASSIGNMENT 2

B.A./B.Com./B.Sc./B.H.M./B.B.A./B.B.M. DEGREE EXAMINATION, DECEMBER 2020.

First Year

SANSKRIT PAPER – I (NR)

MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

1. Answer the following with reference to context.

ससन्दर्भं व्याख्यात।

- (a) यथा पुरस्तान्मनुना मानवेन्द्रेण।
- (b) नक्षत्राणीव चन्द्रमाः।
- (c) निन्दितानि न सेवते।
- (d) मित्रम् द्वेष्टि हिनस्ति च।
- (e) शरीरमाद्यं खलुधर्मसाधनम्।
- (f) क्लेशः फलेन हि पुनर्नवतां विधत्ते।
- (g) अस्मिन् कानने दूरीकृतकलमो वसामि।
- (h) दूनमुखा हि राजानः सर्व एव।

2. Translate into English or Telugu.

आन्ध्रभाषायां वा आङ्गलभाषायां वा अनुवादत।

- (a) अमित्रं कुरुते मित्रं मित्रं द्वेष्टि हिनस्ति च।
कर्म चारभते दुष्टं तमाहुर्मूढचेतसाम्॥
- (b) आत्मनो बलमज्ञाय धर्मार्थपरिवर्जितम्।
अलभ्यमिच्छ नैष्कर्म्यान्मूढबुद्धिरिहोत्पद्यते॥
- (c) निषेवते प्रशस्तानि निन्दितानि न सेवते।
अनास्तिकः श्रद्धधान एतत्पण्डितलक्षणम्॥
- (d) तत्त्वज्ञः सर्वभूतानां योगज्ञः सर्वकर्मणाम्।

उपायज्ञो मनुष्याणां नरः पण्डित उच्यते॥

3. (a) Write the forms of in the other numbers of given persons :

तत्सङ्करेषु धातु रूपाणि लिखत।

- | | |
|----------------|---------------|
| (i) भवति | (ii) गमिष्यति |
| (iii) तिष्ठेन् | (iv) वितस्तु |
| (v) लभते | (vi) अमोदत |
| (vii) वन्दते | (viii) अस्ति। |

(b) Decline as per the case ending.

तत्तद्धिभक्तिषु शब्दरूपाणि लिखत।

- | | |
|------------|--------------|
| (i) देवस्य | (ii) कवेः |
| (iii) यानौ | (iv) पितरि |
| (v) गवा | (vi) रमायाम् |
| (vii) मतिः | (viii) नधै। |

(c) Combine Sandhis.

सन्धत्त।

- | | |
|-------------------|---------------------|
| (i) वधू + ऊहः | (ii) नव + उदयः |
| (iii) धातृ + अंशः | (iv) तौ + अत्र |
| (v) तत् + च | (vi) तत् + टीका |
| (vii) षट् + मुखः | (viii) अच् + अन्तः। |

(d) Dissolve.

विग्रहवाक्यानि लिखत।

- | | |
|---------------------|------------------|
| (i) प्रत्यक्षम् | (ii) पूर्वकायः |
| (iii) भूतबलिः | (iv) चोरभयम् |
| (v) अधर्मः | (vi) नीलोत्पलम् |
| (vii) पुरुषव्याघ्रः | (viii) पञ्चगवम्। |

(DHIN 1 (NR))

ASSIGNMENT 1

B.A./B.Com./B.Sc./B.H.M./B.B.A./B.B.M. DEGREE EXAMINATION, DECEMBER 2020.

First Year
HINDI PAPER – I (NR)

MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

1. सन्दर्भ सहित व्याख्या कीजिए।
 - (a) साहित्य की दुनिया में रहस्यवादी जीव यदि कोई है तो वे निश्चय ही एक तरह के आलोचक हैं।
 - (b) अजी, अब भी तुम्हें काम है? अब तो छुट्टियाँ हैं, तुम्हें फुरसत ही फुरसत हैं और फिर जर्म तो बेहोश होकर अंगद का पैर बनकर रह गये।
 - (c) ईर्ष्या का काम जलाना है; मगर, सबसे पहले वह उसी को जलाती है, जिसके हृदय में उसका जन्म होता है।
 - (d) सरलता की देवी। मैं मगध का राजकुमार, तुम्हारे अनुग्रह का प्रार्थी हूँ- मेरे हृदय की भावना अवगुण्ठन में रहना नहीं जानती। उसे अपनी।
 - (e) “कब के गये हुए हैं?” “सबरे उठते ही चले जाते हैं।”
2. पाठ का सारांश विशेषताओं सहित लिखिए।
 - (a) कवि और कविता।
 - (b) सोना हिरनी।
3. पाठ का सारांश विशेषताओं सहित लिखिए।
 - (a) ईर्ष्या: तू न गयी मेरे मन से।
 - (b) मेरी रूमाल खो गई।
4. कहानी का सारांश विशेषताओं सहित लिखिए।
 - (a) पुरस्कार।
 - (b) सदाचार का तावीज।

ASSIGNMENT 2

B.A./B.Com./B.Sc./B.H.M./B.B.A./B.B.M. DEGREE EXAMINATION, DECEMBER 2020.

First Year

HINDI PAPER – I (NR)

MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

1. (a) हिन्दी सीखने की आवश्यकता बताते हुये अपने छोटे भाई को पत्र लिखिये ।
(b) आपके मुहल्ले की गंदगी के विषय में नागरपालिका के अधिकारी को पत्र लिखिए।
2. प्रश्नों का जवाब दस पतियों में लिखिए।
(र) गंगी का चरित्र-चित्रण कीजिए।
(b) बाबा भारती का चरित्र-चित्रण कीजिए।
(c) “सदाचार का तावीज” कहानी का शीर्षक की सार्थकता पर प्रकाश डालिए।
(d) “रोज” कहानी का उद्देश्य क्या है?
3. सब प्रश्नों का उत्तर लिखना अनिवार्य है।
(a) यह घोड़ी तेज चलती है।
(“लिंग” बदलकर लिखिए)
(b) किसान खेत में काम करता है।
(“वचन” बदलकर लिखिए)
(c) राजा नहीं बैठता।
(वाच्य बदलिये)
(d) वह गा रहा है।
(इसे भूतकाल में लिखिये)
(e) मैं मद्रास जाऊँगा।
(इसे वर्तमान काल में लिखिये)
(f) मेज़ पर दवात है।
(कारक का नाम लिखिए)

- (g) दशरथ की तीन रानी थी।
(शुद्ध कीजिये)
- (h) उसने आम खाये।
(वाच्य बदलकर लिखिए।)
- (i) हे भगवान! लोगों का सदबुद्धि दे।
(कारक का नाम लिखिए।)
- (j) Postman
(इस शब्द का अर्थ हिन्दी में लिखिए।)

4. शब्दों का अर्थ हिन्दी में लिखकर वाक्यों में प्रयोग कीजिए।

- (a) बसर करना
- (b) तिनके का सहारा
- (c) विरासत
- (d) हवन
- (e) दुर्भिक्ष।
-

(DSPL 11)

ASSIGNMENT-1

B.Sc. DEGREE EXAMINATION, DECEMBER 2020

First Year

PROGRAMMING USING C LANGUAGE (IT)

MAXIMUM MARKS : 30

ANSWER ALL QUESTIONS

1. What is datatype? Write about primitive and derived datatypes in C-language.
2. (a) Write a C-program using relational operation.
(b) Explain about arithmetic expressions and logical operations.
3. Write a C-program to sort 'n' numbers.
4. What are branching statements? Explain with syntax and examples.
5. What are the concepts associated with functions?

(DSPL 11)

ASSIGNMENT-2

B.Sc. DEGREE EXAMINATION, DECEMBER 2020

First Year

PROGRAMMING USING C LANGUAGE (IT)

MAXIMUM MARKS : 30

ANSWER ALL QUESTIONS

1. Write a C-program for matrix multiplication.
 2. Define a pointer. Explain about pointers to pointers.
 3. How can you access structure members? Explain with program.
 4. What are File Handling Functions?
 5. What are the operations on a “UNION”?
-

(DSCO11)

ASSIGNMENT-1

B.Sc. DEGREE EXAMINATION, DECEMBER 2020

First Year

COMPUTER ORGANIZATION (IT)

MAXIMUM MARKS : 30

ANSWER ALL QUESTIONS

1. What is a logic gate? Explain various logic gates with symbol tables and examples.

Logic gate అనగా నేమి? వివిధ రకముల logic gate లు వాటి symbol tables మరియు ఉదాహరణలతో వివరించండి.

2. Explain about combinational circuits.

Combinational circuit ల గూర్చి వివరించండి.

3. Explain about various micro operations with examples.

Micro operations ఉదాహరణలతో వివరించండి.

4. Explain various addressing modes.

వివిధ రకముల addressing modes గూర్చి వివరించండి.

5. Explain about Data Transfer and Manipulation.

Data Transfer మరియు Manipulation గూర్చి వివరించండి.

(DSCO11)

ASSIGNMENT-2

B.Sc. DEGREE EXAMINATION, DECEMBER 2020

First Year

COMPUTER ORGANIZATION (IT)

MAXIMUM MARKS : 30

ANSWER ALL QUESTIONS

- 1 Explain about floating point arithmetic operations.

Floating point arithmetic operations గూర్చి వివరించండి.

- 2 Explain about auxiliary memory and cache memory.

Auxiliary memory మరియు cache memory గూర్చి వివరించండి.

- 3 Explain about input-output interface.

Input-output interface ను వివరించండి.

- 4 Explain about Binary Counters.

Binary Counters గూర్చి వివరించండి.

- 5 Explain about various multiplexers.

వివిధ రకముల multiplexers గూర్చి వివరించండి.

(DSDS 11)

ASSIGNMENT-1

B.Sc. DEGREE EXAMINATION, DECEMBER 2020

First Year

DATA STRUCTURES (IT)

MAXIMUM MARKS : 30

ANSWER ALL QUESTIONS

1. Define Data Structure. What are the different types of Data structure?
డేటా స్ట్రక్చరును నిర్వచించండి. వివిధ రకములైన డేటా స్ట్రక్చరులు ఏవి?
2. What is circular linked list? Write an algorithm to implement circular linked list.
సర్క్యులర్ లింకిడ్ లిస్టులు అనగా [శనేమి](#)? Circular linked list ను implement చేయుటకు అల్గారిథమ్ ను వ్రాయండి.
3. What are different types of queues? Write an algorithm to add an element to queue.
వివిధ రకములైన Queue లు ఏవి? Queue కి element ను add చేయుటకు అల్గారిథమ్ ను వ్రాయండి.
4. How can you allocate memory to arrays? Explain about sparse matrix.
Array లకు మెమోరిలను ఎలా allocate చేస్తారు? Sparse matrix గురించి వివరించండి.
5. Write about pointers and recursion? Give examples for each one.
Pointer [లు](#) మరియు రిక్రూషన్ గురించి వ్రాయండి. ప్రతి ఒక్కదానిని గురించి ఉదాహరణలను ఇవ్వండి.

(DSDS 11)

ASSIGNMENT-2

B.Sc. DEGREE EXAMINATION, DECEMBER 2020

First Year

DATA STRUCTURES (IT)

MAXIMUM MARKS : 30

ANSWER ALL QUESTIONS

- 1 What is balanced tree? Explain in detail.
Balanced tree అనగా నేమి? పూర్తిగా వివరించండి.
 - 2 What is binary tree? Give an examples for linked representation of Binary trees.
బైనరీ tree అనగా నేమి? Binary tree లను ఎలా represent చేస్తామో ఉదాహరణలను ఇవ్వండి?
 - 3 What is selection sort? Explain with program.
Selection sort అనగా నేమి? Program తో వివరించండి.
 - 4 What are control structures? Explain with syntaxes.
కంట్రోలు స్ట్రక్చర్లు అనగా నేమి? Syntax లతో వివరించండి.
 - 5 What do you mean by merge sort? How it occurs? Explain with program.
Merge sort అంటే అర్థమేమిటి? ఇది ఎలా ఉంటుందో program తో వివరించండి.
-

ASSIGNMENT-1

B.Sc. DEGREE EXAMINATION, DECEMBER 2020

First Year

DISCRETE MATHEMATICS (IT)

MAXIMUM MARKS : 30

ANSWER ALL QUESTIONS

1. (a) State and prove De Morgan's laws.
(b) In a survey of 60 people, it was found that 25 read news week magazine, 26 read time, 26 read fortune, 9 read both news week and fortune, 11 read both news week and time, 8 read both time and fortune, 3 read all three magazines.
 - (i) Find the number of people who read atleast one of the three magazines.
 - (ii) Fill in the correct number of people in each of the eight region of the venn diagram where N,T and F denote the set of people who read news week, time and fortune resptly
 - (iii) Find the number of people who read exactly one magazine.
2. (a) Verify that the proposition $p \vee \neg(p \wedge q)$ is tautology and define tautology also.
(b) Show that the propositions $\neg(P \wedge q)$ and $\neg p \vee \neg q$ are logically equivalent.
3. (a) Prove that $\binom{17}{6} = \binom{16}{5} + \binom{16}{6}$.
(b) Find the number m of ways that nine toys can be divided between four children if the youngest child is to receive three toys and each of the others two toys.
4. (a) Prove that the sum of the degrees of the vertices of a graph G is equal to twice the number of edges in G.
(b) State and prove Euler theorem ie $V - E + R = 2$.

ASSIGNMENT-2

B.Sc. DEGREE EXAMINATION, DECEMBER 2020

First Year

DISCRETE MATHEMATICS (IT)

MAXIMUM MARKS : 30

ANSWER ALL QUESTIONS

- 1 (a) Draw all possible non similar trees T where.
 - (i) T is a binary tree with three nodes
 - (ii) T is a 2-tree with four external nodes(b) Suppose the following list of letters is inserted into an empty binary search tree.
J, R, D, G, W, E, M, H, P, A, F, Q
 - (i) Find the final tree T
 - (ii) Find the inorder transversal of T
- 2 (a) Explain the algorithm inserting and deleting in a binary search tree.
(b) Explain the inserting into a heap and deleting the root from a heap ie algorithm
- 3 (a) The following are equivalent in a Boolean algebra
 - (i)
 - (1) $a+b=b$
 - (2) $a * b = a$
 - (3) $a^1+b=1$
 - (4) $a * b^1 = 0$
 - (ii) Express each Boolean expression $E(x,y,z)$ as a sum of products
 - (1) $E = x(xy^1 + x^1y + y^1z)$
 - (2) $E = Z(x^1 + y) + y^1$(b) Let $E = xy + y^1t + x^1yz^1 + xy^1zt^1$ find
 - (i) Prime implicants of E
 - (ii) Minimal sum for E
