

**C-7017**

**Sub. Code**

**11F**

**COMMON FOR ALL U.G. DEGREE COURSES  
EXAMINATION, NOVEMBER 2022**

**First Year — First Semester**

**Part I — FRENCH**

**(2016 to 2018 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. La capitale de la France C'est \_\_\_\_\_ (Berlin/Paris)
2. Pour saluer le matin \_\_\_\_\_ (Bonfour/Merci)
3. Pour Lundi en englose \_\_\_\_\_ (Tuesday/Monday)
4. Nous \_\_\_\_\_ (I/we)
5. Name two monuments in France ?
6. Why is Paris is known as "VILLE LUMIERE"?
7. What is the currency of France ?
8. Why is the flag of France called "Tricolore"?
9. Why is France referred to as the "Hexagone"?
10. Ecrivez les nombres en lettres :
  - (a) 100 \_\_\_\_\_
  - (b) 200 \_\_\_\_\_

**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) Ecrivez les jours de la remanie.

OU

- (b) Ecrivez les mois de l'annee.

12. (a) Conjuguez le verbe "etre".

OU

- (b) Conjuguez le verbe "avoir".

13. (a) Conjuguez le verbe "Rester".

OU

- (b) Conjuguez le verbe "S"appler.

14. (a) Lister deractio en français.

OU

- (b) Liste hors saison en français.

15. (a) Enumerer Cinq Legumes en français.

OU

- (b) Enumerer Cinq fruits en français.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. Ecrivez les nombres

- (a) 1 to 25

OU

- (b) 25 × 50

17. (a) Decrit un paya “france”.

OU

(b) Ecrivez dix couleurs en française.

18. (a) Presente toi en minimum 03 paragraphe.

OU

(b) Decrivez votre jeu préféré au minimum 03 paragraphe.

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C-7018

Sub. Code

11H

U.G. DEGREE EXAMINATION, NOVEMBER 2022

First Year/First Semester

Part I – Hindi

STORY, NOVEL, GRAMMAR AND TRANSLATION – I

(Common for all U.G. Degree Courses/First Semester)

(2016 to 2018 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

सभी प्रश्नों के उत्तर संक्षेप में लिखिए।

1. आनन्दी ने लालबिहारी की क्या शिकायत की थी?
2. रामू की माँ ने क्यों पंडितजी के पैर पकड़े?
3. लहनासिंह ने नकली लपटन को कैसे पहचाना?
4. मोहनलालजी महतो 'वियोगी' का संक्षिप्त परिचय दीजिए।
5. उदयभानुलाल और कल्याणी के बीच झगड़ा क्यों हुआ?
6. निर्मला से रुक्मणि का व्यवहार कैसा था?
7. नयनसुखराम ने तोताराम को क्या सलाह दिया?
8. कृष्णा की शादी किससे हुई ? और क्यों?

9. लिंग बदलिए।  
(a) मालिक (b) कवि  
(c) ठाकुर (d) विधवा
10. वचन बदलिए  
(a) लड़की (b) आँख  
(c) जू (d) माला

**Part B**

(5 × 5 = 25)

सभी प्रश्नों के उत्तर दीजिए।

11. (a) बेनिमाधव सिंह से श्रीकंठ का व्यवहार कैसा था?  
या  
(b) मिसरानी का चरित्र-चित्रण कीजिए।
12. (a) 'उसने कहा था' - इस कहानी में किसने किससे क्या कहा था?  
या  
(b) 'पाँच मिनट' कहानी का संदेश क्या है?
13. (a) मंसाराम की मृत्यु का जिम्मेदार कौन हैं? स्पष्ट कीजिए।  
या  
(b) भुवनमोहन सिन्हा ने क्यों आत्महत्या कर लिया?
14. (a) सियाराम साधू के जाल में कैसे फँस गया?  
या  
(b) रंगीलीबाई का चरित्र-चित्रण कीजिए।

15. (a) सर्वनाम किसे कहते हैं? उनके भेदों को उदाहरण सहित समझाइए।

या

(b) पुल्लिंग से स्त्रीलिंग बनाते के नियमों को उदाहरण सहित समझाइए।

**Part C**

(3 × 10 = 30)

सभी प्रश्नों के उत्तर विस्तार से लिखिए।

16. (a) प्रायश्चित्त कहानी का सारांश लिखकर विशेषताएँ बताइए।

या

(b) निर्मला का चरित्र-चित्रण कीजिए।

17. (a) संज्ञा किसे कहते हैं? उनके भेदों को उदाहरण सहित समझाइए।

या

(b) विशेषण की परिभाषा देकर उसके भेदों को उदाहरण सहित समझाइए।

18. (a) पाँच मिनट कहानी का सारांश लिखिए।

या

(b) अंग्रेजी में अनुवाद कीजिए।

वही समाज श्रेष्ठ है और वही राष्ट्र सुखी है जिसकी जनता का चरित्र अच्छा हो। आज के बालक कल के नागरिक हैं। इसलिए उनके चरित्र का निर्माण करना समाज और राष्ट्र का पहला कर्तव्य है।

में पिताजी की बहुत इज्जत करता था। मैं उन्हें बल, साहस और होशियारी की मूर्ति समझता था और दूसरों के मुकाबले में उन्हें बहुत ही ऊँचा और बड़ा-चढ़ा पाता था।

कौए के संबन्ध में एक रोचक कथा है। कहते हैं, एक बार वह कोयल का बाना धारण करके चारों ओर लोगों की आँखों में धूल झोंकता फिरा। कई मास ऐसे ही बीते। जब वसंत आया, तो असली कोयल ने तो पंचम स्वर में गाना आरंभ कर दिया, पर कोयल चुप रहा।

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C-7016

Sub. Code

11T

U.G. DEGREE EXAMINATION, NOVEMBER 2022.

First Year / First Semester

Tamil – Part-I

தமிழ்ச் செம்மொழியும் தமிழர்களின் பன்முகத்திறனும்

(Common for all UG Degree courses)

(2016 to 2018 onwards)

Duration : 3 Hours

Maximum : 75 Marks

பகுதி அ

(10 × 2 = 20)

அனைத்து வினாக்களுக்கும் விடையளிக்கவும்.

1. தனிநிலைமொழி என்றால் என்ன?
2. தமிழைச் செம்மொழி என்று முதலில் கூறிய வெளிநாட்டு அறிஞர் யார்?
3. செம்மொழி நூல்களில் உள்ள இலக்கணநூல்களைக் கூறுக.
4. வண்ண ஆடை என்பதென்ன?
5. குழந்தைகளின் அணிகலன்களைக் குறிப்பிடும் இலக்கியச்சான்று ஒன்று காட்டுக.
6. தமிழ் இலக்கியங்கள் காட்டும் இசைக்கருவிகள் இரண்டினைச் சுட்டுக.
7. நடுகல் - குறிப்பு வரைக.
8. நாள், கோள் பற்றிய நம்பிக்கைகள் பண்டைக் காலத்தில் இருந்தமைக்குச் சான்று ஒன்று காட்டுக.



9. உடற்பயிற்சி பற்றிக் கூறும் அறநூலைச் சுட்டுக.

10. புல்லரிசி என்பதென்ன?

**பகுதி ஆ**

(5 × 5 = 25)

**அனைத்து** வினாக்களுக்கும் விடை தருக.

11. (அ) மொழிக்குடும்பங்கள் பற்றி எடுத்துரைக்க.

(அல்லது)

(ஆ) செம்மொழிக்களைத் தகுதிகளை விரித்துரைக்க.

12. (அ) ஒற்றை ஆடை, இரட்டை ஆடை, என்பதென்ன? சான்றுடன் விளக்குக.

(அல்லது)

(ஆ) காலத்திற்கு ஏற்ற உடை என்பது குறித்து எடுத்துரைக்க.

13. (அ) சங்க இலக்கியங்கள் வழி அறியப்படும் அணிகலன்களுக்குச் சான்று காட்டி விரித்துரைக்க.

(அல்லது)

(ஆ) ஆண்கள் அணியும் அணிகலன்களாக இலக்கியங்கள் குறிப்பிடுவற்றைச் சான்றுடன் எடுத்துரைக்க.

14. (அ) ஒவியக்கலை பண்டைக்காலத்தில் சிறப்புற்றிருந்தமைக்கு இலக்கியச் சான்று காட்டுக.

(அல்லது)

(ஆ) சிலம்பில் மாதவி ஆடும் ஆடல்களை விரித்துரைக்க.

15. (அ) செம்மொழி இலக்கியங்களில் காணலாகும் அறிவியல் சிந்தனைகள் எடுத்துரைக்க.

(அல்லது)

(ஆ) இலக்கியங்கள்வழி அறியலாகும் நீர்மேலாண்மை குறித்து எடுத்துரைக்க.

அனைத்து வினாக்களுக்கும் விடை தருக.

16. (அ) தமிழன் தொன்மை குறித்துக் கட்டுரைக்க.

(அல்லது)

(ஆ) சங்க இலக்கியங்கள் செம்மொழித் தகுதி பெற்றிருப்பதனைச் சான்றுடன் நிறுவுக.

17. (அ) பண்பாட்டைப் போற்றுவதில் செம்மொழி இலக்கியங்கள் பெறும் இடம்குறித்துக் கட்டுரை வரைக.

(அல்லது)

(ஆ) இலக்கியங்களில் ஆடைகள் - கட்டுரை வரைக.

18. (அ) அணிகலன்கள் பற்றிய பழந்தமிழ் இலக்கியப் பதிவுகளைச் சான்றுடன் விளக்கி வரைக.

(அல்லது)

(ஆ) நடனக்கலை சிறப்புற்றிருந்தமைக்குச் சிலப்பதிகாரம் சான்றாதலை விளக்கியுரைக்க.

**C-5670**

**Sub. Code**

**91411/12**

**Common for all U.G. B.Sc./B.B.A. DEGREE  
EXAMINATION, APRIL 2022**

**First Year/First Semester**

**English**

**Part II – ENGLISH PROSE AND COMMUNICATION  
SKILLS**

**(2016 to 2018 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. What is vocational education?
2. What is it that Indira Gandhi does not demand?
3. What did Stevenson ride on?
4. What was the boy's reaction to the punishment?
5. What was remarkable about Ernest Thompson Seton's *Wild Animals I have Known*?
6. What are the tree visions that Sarojini Naidu talks of?
7. He \_\_\_\_\_ my uncle yesterday. (Use correct form of verb)
8. Define Noun.
9. Seenu is a boy \_\_\_\_\_ poor family. (use appropriate preposition)
10. \_\_\_\_\_ you like to have tea or coffee? (Use correct auxiliaries)

**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write a short note on how to attain Excellence I education emphasized by Livingstone.

Or

- (b) Substantiate Indira Gandhi's view that the youth are the backbone of India.

12. (a) What is the usefulness of forming habits?

Or

- (b) How does the teacher try to repair the damage done and with what result?

13. (a) What books did Margaret Atwood enjoy reading?

Or

- (b) What does Sarojini Naidu say about the vision of patriotism?

14. (a) Write a short note on types of sentences.

Or

- (b) Fill in the blanks using Present Perfect Continuous Tense:

- (i) The \_\_\_\_\_ (work) all day.  
(ii) He eyes were red because she \_\_\_\_\_ (cry).  
(iii) She \_\_\_\_\_ ( sing) upto that morning.  
(iv) They \_\_\_\_\_ (wait) for her since 8 0' clock.  
(v) Mani \_\_\_\_\_ (read) this book for the past three hours.

15. (a) Write the correct sentence pattern.
- (i) I finished the work.
  - (ii) She worked in a reputed company.
  - (iii) Our headmaster Sideline was a lending library.
  - (iv) They made David Chairman of the Rotary Club.
  - (v) We wish you happy new year.

Or

- (b) Fill in the blanks using appropriate Prepositions:
- (i) He came \_\_\_\_\_ the office \_\_\_\_\_ a big hurry.
  - (ii) We drove \_\_\_\_\_ the store.
  - (iii) Four armed men held \_\_\_\_\_ the bank.
  - (iv) We finally lived \_\_\_\_\_ that incident.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) What, according to Livingstone, are the essentials of education?

Or

- (b) Write an essay on personality of Indira Gandhi as revealed in her speeches.

17. (a) What are Gardiner's views on the desirability or otherwise of forming habits?

Or

- (b) Write an essay in 500 words about the relationship between the rich student and the poor teacher.

18. (a) Write an essay on present tenses.

Or

(b) Fill in the blanks with correct preposition.

Nehru was called \_\_\_\_\_ to say a few words  
\_\_\_\_\_ the occasion \_\_\_\_\_ the  
assassination \_\_\_\_\_ Gandhi \_\_\_\_\_ an  
utter sense \_\_\_\_\_ shame, Nehru expressed  
his regret \_\_\_\_\_ the failure out country  
\_\_\_\_\_ give protection \_\_\_\_\_ the life  
\_\_\_\_\_ this great man, as well as that  
\_\_\_\_\_ many an innocent man, woman and  
child.

\_\_\_\_\_

**C-7021**

**Sub. Code**

**21F**

**B.Sc./B.B.A. DEGREE EXAMINATION, NOVEMBER 2022.**

**Second Year — Second Semester**

**Part I — FRENCH**

**(Common for All UG Degree Courses)**

**(2016 to 2018 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Comment vas-tu?
2. Ça fait longtemps, comment vas-tu?
3. Comment t'appelles-tu?
4. Je m'appelle Peter. Comment t'appelles-tu?
5. Quel est ton numéro de téléphone?
6. J'aimerais t'appeler. Quel est ton numéro de téléphone ?
7. Quel âge as-tu?
8. Tu dois avoir 21 ans pour rentrer ici. Quel âge as-tu ?
9. D'où venez-vous?
10. Vous semblez être britannique. D'où venez-vous?

**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) énumérer 05 légumes en français.

Ou

- (b) Lister 05 fruits en français.

12. (a) Écrire la saison en français.

Ou

- (b) Écrire les instructions en français.

13. Écrire les noms de pays en français :

- (a) (i) India  
(ii) Japan  
(iii) China  
(iv) Italy  
(v) Rome.

Ou

- (b) (i) Denmark  
(ii) London  
(iii) Australia  
(iv) Europe  
(v) Sweden.

14. Écrire des nombres en français :

- (a) (i) 100  
(ii) 200  
(iii) 300  
(iv) 400  
(v) 500.

Ou



- (b) (i) 50
- (ii) 65
- (iii) 70
- (iv) 80
- (v) 90.

15. (a) Ecrire les membres de la famille en français.

Ou

(b) Ecrire les jours d'une semaine en français.

**Part C** (3 × 10 = 30)

Answer **all** questions.

16. (a) Ecrire des alphabets en français.

Ou

(b) Ecrire les mois de l'année en français.

17. (a) Ecrivez les nombres de 1 à 25 en français.

Ou

(b) Ecrivez les nombres de 25 à 50 en français.

18. (a) Présente-toi en français.

Ou

(b) Expliquez votre ville natale en français.

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C-7022

Sub. Code

21H

U.G. DEGREE EXAMINATION, NOVEMBER 2022

Second Year/Second Semester

Part I – Hindi – II

HINDI II — PROSE, GRAMMAR AND  
TRANSLATION – II

(Common for all U.G. Degree Courses)

(2016 to 2018 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

सभी प्रश्नों के उत्तर संक्षेप में लिखिए।

1. वह कौन-सी वस्तु है जो विभिन्नता में एकता बनाये हुए है?
2. घृणा और भय में क्या सम्बन्ध है?
3. लेखक ने रजिया को अंतिम बार किस रूप में देखा?
4. 'मक्रील' कहानी की भाषा पर प्रकाश डालिए।
5. 'बहता पानी निर्मला' पाठ का निष्कर्ष क्या है?
6. गाँधीजी के प्रधान सिद्धांत क्या है?
7. यात्रा के कौन-कौन तरीके हैं? वे क्या है?
8. भारत के सम्बन्ध में गाँधीजी की कल्पना क्या थी?

9. चुड़िहारिन के पेशे में क्या विशेषतायें होनी चाहिए?
10. घृणा किस प्रकार की मनोवृत्ति है और यह किसके लिए सिरजी गयी है?

**Part B**

(5 × 5 = 25)

सभी प्रश्नों के उत्तर लिखिए।

संदर्भ सहित व्याख्या कीजिए।

11. (a) हमारी सामूहिक चेतना ऐसे नैतिक आधार पर ठहरी हुई है, जो पहाड़ों से भी मजबूत, समुद्रों से भी गहरी और आकाश से भी अधिक व्यापक है।

या

- (b) कौन नहीं जानता कि वही विष, जो प्राणों का नाश कर सकता है, प्राणों का संकट भी दूर कर सकता है।

12. (a) और गोरे चेहरे तो मिले हैं, किंतु इनकी आँखों में जो एक अजीब किस्म का नीलापन दिखा, वह कहाँ?

या

- (b) समीप खड़ी एक युवती को देख, भद्रता से टोपी छूते हुए उसने पूछा, 'आप भी इसी होटल में ठहरी हैं'।

13. (a) 'जनाब, अपना बोरिया-बिस्तर समेटिका और ज़रा चलते-फिरते नज़र आइये' यह आप का अपमान नहीं है।

या

- (b) वे झोपडियों में रहते, नंगे पैर चलते, एक धोती-भर पहनते।

व्याकरण

14. (a) अपूर्ण क्रिया से क्या मतलब है? उदाहरण दीजिए।

या

- (b) काल की दृष्टि से क्रिया के भेदों को उदाहरण सहित स्पष्ट कीजिए।

15. (a) 'ने' विधि का प्रयोग समझाइए।

या

(b) संभाव्य भविष्यत् काल किन अर्थों में प्रयुक्त होता है?

**Part C**

(3 × 10 = 30)

सभी प्रश्नों के उत्तर दीजिए। उत्तर विस्तार से हो।

16. (a) 'जीवन में घृणा का स्थान' पाठ का सारांश लिखिए।

या

(b) 'राष्ट्रपिता महात्मा गाँधी' पाठ का सारांश लिखिए।

17. (a) 'क्रिया विशेषण' किसे कहते हैं? अर्थ के अनुसार इसके कितने भेद हैं? उदाहरण सहित समझाइए।

या

(b) 'कारक' किसे कहते हैं? उनके भेदों को उदाहरण सहित समझाइए।

18. हिन्दी में अनुवाद कीजिए।

(a) Many people say that the climate of England and that of Kodaikanal are almost the same. You do not have as much heat at Kodaikanal, as you have at Ooty during the day-time. The temperature at night is also not so cold as at Ooty. The natural scenery of Kodaikanal is just like that of England. But on account of better travel facilities more people go to Ooty. Hence there is more calm at Kodaikanal than at Ooty.

या

- (b) Everyone has a right to have enough good food to eat, if he earns it by his work. Here the state has a great responsibility. It must try to find food for all the people, to be sold at prices which they can afford to pay. The Government should, therefore, try to improve food production by helping the farmers in many ways.
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C-7020

Sub. Code

21T

UG DEGREE EXAMINATION, NOVEMBER 2022

Second Year / Second Semester

Part I – இலக்கணமும் படைப்பிலக்கியமும்

Tamil

Common for all UG Degree Course

(2016 to 2018 onwards)

Duration: 3 Hours

Maximum : 75 Marks

பகுதி அ

(10 × 2 = 20)

அனைத்து வினாக்களுக்கு விடையளி.

1. முதலெழுத்துக்கள் என்பவை எவை?
2. மொழியிறுதி எழுத்துக்கள் யாவை?
3. புதுக்கவிதையின் இலக்கணம் பற்றி வரைக.
4. மீராவின் கவிதைத் திறன் குறித்துரைக்க.
5. தமிழ்ச் சிறுகதைத் தோற்றம் குறித்து எழுதுக.
6. அசோகமித்ரனின் சிறுகதைப் பாங்கு யாது?
7. 'வலைப்பூ' - விளக்குக.
8. கவிதையின் அமைப்பு பற்றி எழுதுக.
9. இணையமும் தமிழும் - குறிப்பு வரைக.
10. படைப்பில் – கற்பனை பெறும் இடம் யாது?

அனைத்து வினாக்களுக்கு விடையளி.

11. (அ) சார்பெழுத்துக்களின் வகைகளை விவரி.

(அல்லது)

(ஆ) வல்லினம் மிகா இடங்களைக் காட்டுக.

12. (அ) மு. மேத்தா வைகறை கவிதையில் உரைப்பனவற்றைத் தருக.

(அல்லது)

(ஆ) வைரமுத்துவின் கவிதைச் சிறப்பினைத் தருக.

13. (அ) சாபவிமோசனம் கதைக் கருவை விவரி.

(அல்லது)

(ஆ) பரிசு கதையில் காணப்படும் சமூக உணர்வுகளைத் தெளிவுபடுத்துக.

14. (அ) மின் நூலகம் குறிப்பு வரைக.

(அல்லது)

(ஆ) இணையமும் தமிழ் வளர்ச்சித் துறையும் பற்றி விளக்குக.

15. (அ) இன்றைய சிறுகதைகளின் நிலை யாது?

(அல்லது)

(ஆ) இணைய வளர்ச்சி குறித்து ஆய்க.

பகுதி இ

(3 × 10 = 30)

அனைத்து வினாக்களுக்கு விடையளி.

16. (அ) உடம்படுமெய் பற்றி விவரிக்க.

(அல்லது)

(ஆ) மொழிமுதல் எழுத்துக்களைச் சான்றுடன் விளக்குக.

17. (அ) சிறுகதை வளர்ச்சி குறித்து மதிப்படுக.

(அல்லது)

(ஆ) புதுக்கவிதையின் தோற்றமும் வளர்ச்சியும் பற்றி ஆய்க.

18. (அ) மின்னஞ்சல் என்பதனை விளக்குக.

(அல்லது)

(ஆ) 'மூத்தோர் சொல்' எனும் தலைப்பில் சிறுகதை படைக்க.



**C-5674**

**Sub. Code**

**91421/22**

**B.Sc./B.B.A. DEGREE EXAMINATION, APRIL 2022**

**Second Year/Second Semester**

**Common for all UG Degree Courses**

**Part II – ENGLISH - PROSE, EXTENSIVE READING  
AND COMMUNICATION SKILLS**

**(2016 to 2018 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Kalam is proud of having worked with three great men. Who are they?
2. What kind of society did we have in the pre-war period?
3. What are the two ways in which science benefits man?
4. Why does Nehru regard Gandhi as the sun?
5. What experiences do students in schools and colleges have in arguing?
6. What was the agreement between Bob and Jimmy twenty years before, when they parted?
7. How did the Quick man explain it away?

8. What did the stranger want to know?
9. What are the types of adjective clause?
10. What is Sub-ordinate Conjunctions? Give example.

**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) What does Kalam say about the passivity of Indians?

Or

- (b) What are the contradictory views of Plato on the artist's role in society?

12. (a) How does Nehru reconcile himself with Gandhi's death?

Or

- (b) What is Lynd's conversion to socialism and nationalism?

13. (a) How does the true friendship reflect in *After Twenty Years*?

Or

- (b) How did the conjuror take his revenge on the Quick Man?

14. (a) How did the father test the skills of his sons?

Or

- (b) How do Phrase help in making of Simple sentence?

15. (a) Jot down the changes/ rules while transforming the Exclamatory sentences of Direct speech into Indirect speech.

Or

- (b) Write a paragraph on the 'Formation of Positive and Superlative Degrees'.

**Part C** (3 × 10 = 30)

Answer **all** questions.

16. (a) Write an essay on Kalam's three visions.

Or

- (b) What does Holt say about ballet training? What does he deduce from it?

17. (a) How are the two friends contrasted?

Or

- (b) Elucidate how the conjuror's tricks and the Quick Man's deflationary comments for it.

18. (a) What are the kinds of Conjunctions? Explain in detail.

Or

- (b) What are the Degrees of comparison? Explain with examples.

**C-7024**

**Sub. Code**

**31**

**COMMON FOR ALL U.G. DEGREE COURSES  
EXAMINATION, NOVEMBER 2022**

**Third Semester/Third Year**

**Part II — ENGLISH**

**COMMUNICATIVE SKILLS**

**(2016 to 2018 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. What is meant by non-verbal communication?
2. How do you manage noise situation on your presentation?
3. Frame Question for the following sentences.
  - (a) I would like to become an investigating agent.
  - (b) He had worked here for the past ten years.
4. Define Homophones.
5. Give two example for wrong position of adverb.
6. What is the main use of interjections?
7. What are called consonants?
8. What is meant by rising intonation?
9. What are the benefits of skimming?
10. Mention any two mechanics of good handwriting.

**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) Write a paragraph on non-verbal communication.

Or

- (b) What are the ways of challenging the barriers of communication?

12. (a) Write a short note on homophones with examples.

Or

- (b) Change the following active sentences into passive voice.

(i) I did not beat her.

(ii) I will never forget this experience.

(iii) Mother made a cake yesterday.

(iv) The tiger was chasing the deer.

(v) She has written a novel.

13. (a) Write a note on wrong position of adverbs.

Or

- (b) Write in short on some confused use of adjectives.

14. (a) Write a note on primary stress with proper examples.

Or

- (b) Describe the general use of intonation.

15. (a) What are the uses of silent reading?

Or

(b) What is the role of SQ3R in communication?

**Part C** (3 × 10 = 30)

Answer **all** questions.

16. (a) Discuss in detail on effective ways of communication.

Or

(b) Write an essay on barriers to communication and effective ways to overcome the barriers.

17. (a) Write briefly on the following :

(i) Phrasal verbs

(ii) Conditional clause.

Or

(b) Write an essay on common confusions of parts of speech.

18. (a) Write an essay on the types of reading and developing reading strategies.

Or

(b) Explain briefly on mechanics of good handwriting.

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**C-7025**

**Sub. Code**

**41**

**U.G. DEGREE EXAMINATION, NOVEMBER 2022**

**Fourth Semester**

**Part II — English**

**EMPLOYABILITY SKILLS**

**(Common for all UG Degree Courses)**

**(2016 to 2018 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** following questions.

1. How do you introduce a person in a public meeting?
2. What is meant by head to foot appearance?
3. Why do we write letters?
4. What are the basic elements for writing job application?
5. What are the different types of greetings?
6. Define portfolio.
7. What is meant by oral composition?
8. What are the three main parts of a composition?
9. Define kinesics.
10. What are the technical elements for using video aids for communication?

**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) Write in short on telephonic etiquettes.

Or

- (b) Describe in short on head to foot appearance.

12. (a) What are the important aspects on resume writing?

Or

- (b) Write a letter to the editor about your street road's poor condition.

13. (a) Write in short on merits of e-mail.

Or

- (b) Write in short on developing topic sentences into paragraph.

14. (a) Write briefly on written composition.

Or

- (b) Write a paragraph on 'e-waste'.

15. (a) Write in short on gesture.

Or

- (b) Describe in short on the uses of visual aids.



**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Write an essay on interview techniques and head to foot appearance while attending interview.

Or

- (b) Write a letter to the manager for the post of sales officer along with your resume.

17. (a) Write an essay on preparing portfolios and its various types.

Or

- (b) Write a review for two books that you recently read.

18. (a) Read the passage below and then answer the following questions.

One day, my father talked to his phone for a long time his airtime got used up before he could end his talk. He was conversing with his workmate, Mr. Obadiya. He decided to send me to buy more airtime.

Using My bicycle, I rode as fast as a horse. I returned within ten minutes with airtime. When I reached home, I found my father busy listening to the news on radio. He was so attentive that he did not want any disturbance. He therefore, gave me the mobile phone to load the airtime for him.

I was excited because I was going to do so for the first time. I got the airtime card and scratched it. Since I did not know what to do after scratching, I opened the phone. Then I took it to my father thinking I had done the right thing.

My father immediately tried to call his friend. He dialed repeatedly but the call could not go through. "Have you loaded the airtime"? he asked me. I responded happily that I had loaded it. As he removed the battery, the airtime card dropped on the floor. "Oh my son! you did not know how to load airtime !" he laughed. I was disappointed that I did not load airtime for my father. He realized that I was sad. He held me in his arms and said, "don't worry my son. Let's do it together". Then he loaded as I was watching. I was very happy to learn how to load airtime.

Questions for composition :

- (i) What happened to the airtime of the father?
- (ii) Why did the writer go to the shop?
- (iii) When the writer brought airtime, what was his father doing?
- (iv) Why was the writer excited?
- (v) Why did the writer get disappointed?

Or

- (b) Write an essay on different types of visual aids.

**C- 7019**

**Sub. Code**

**91411/12**

**U.G. DEGREE EXAMINATION, NOVEMBER 2022**

**First Year / First Semester**

**Part II — English**

**PROSE AND COMMUNICATION SKILLS**

**(Common for All U.G. Degree Courses)**

**(2016 to 2018 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Who is compared to the man who stumbles through his lessons?
2. What are the leadership quality according to Indira Gandhi?
3. Life is a —————
4. What is the main theme of the story “Crime and Punishment”?
5. Name the book which is about recipes as mentioned by Atwood?
6. What is the duty of each community in the view point of Sarojini Naidu?
7. Define Simple Present Tense.

8. Fill in the blanks with correct adjectives :

(a) Elephant is the ——— animal.

(b) She is a ——— lady.

9. Define definite article.

10. Fill in the blanks using correct modals :

(a) ——— I go?

(b) He ——— follow the rules.

**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) Write a short note on quality education leads to attain excellence.

Or

(b) Why does Indira Gandhi insist that youth are the backbone of India?

12. (a) Why was Balfour organized when he had to make a speech?

Or

(b) Describe the relationship between the student and the teacher.

13. (a) Why did Atwood prefer animal stories?

Or

(b) What does Sarojini Naidu say about the vision of patriotism?

14. (a) Explain the uses of simple past and past continuous Tense with examples.

Or

(b) What is Noun? What are the types of Nouns? Explain.

15. (a) Identify the pattern of the following sentences :

- (i) I was working in my father's company.
- (ii) Quality education is a must one.
- (iii) He bought many books about the country.
- (iv) The men have worked for five hours.
- (v) I will meet you there in a moment.

Or

(b) Fill in the blanks with the correct article :

- (i) I saw ——— tiger.
- (ii) This is ——— purse she presented me.
- (iii) The function was quite ——— success.
- (iv) ——— family sits for lunch.
- (v) This car runs at sixty kilometers ——— hour.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) What are Livingstone's views on education?

Or

(b) Write an essay on "On the Power of Youth".

17. (a) What are Gardiner's views on desirability or otherwise of forming habits?

Or

(b) What is the moral of the story "Crime and punishment? Elucidate.

18. (a) Fill in the blanks with correct adverbs from the box:  
(usually, never, once, always, often, mostly, very, sometimes, occasionally, rarely)

- (i) I \_\_\_\_\_ go to bed at 10 O' clock.
- (ii) I have \_\_\_\_\_ been to the USA.
- (iii) I have been to Australia Just \_\_\_\_\_
- (iv) I \_\_\_\_\_ take a bath before I go to bed.
- (v) My grand-parents live in Kerala. I visit them \_\_\_\_\_
- (vi) My friends are \_\_\_\_\_ non-smokers.
- (vii) I was \_\_\_\_\_ impressed with her.
- (viii) I \_\_\_\_\_ go for a walk in the park.
- (ix) I watch English films \_\_\_\_\_
- (x) They \_\_\_\_\_ go out.

Or

(b) Fill in the blanks with appropriate prepositions :

- (i) The old man sat \_\_\_\_\_ the chair.
- (ii) He jumped \_\_\_\_\_ the wall.
- (iii) He has been singing here \_\_\_\_\_ 8 O' clock.
- (iv) He earned more \_\_\_\_\_ his sister.
- (v) He ran \_\_\_\_\_ the room.
- (vi) He is walking \_\_\_\_\_ the road.
- (vii) The pries knelt \_\_\_\_\_ the altar as the bride stood by him.
- (viii) \_\_\_\_\_ sweets the corporation building there is a hotel.
- (ix) He spoke \_\_\_\_\_ the independence of India.
- (x) The wholesaler gives commission \_\_\_\_\_ 25%.

C-7026

Sub. Code

11813

**B.Sc. DEGREE EXAMINATION, NOVEMBER 2022**

**First Semester**

**Aeronautical Science**

**MATHEMATICS – I**

**(2016 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Two eigen value of the matrix  $A = \begin{bmatrix} 2 & 2 & 1 \\ 1 & 3 & 1 \\ 1 & 2 & 2 \end{bmatrix}$  are equal to 1 each. Find the eigen values of  $A^{-1}$ .
2. If two eigen values of the matrix  $A = \begin{bmatrix} 1 & 0 & -4 \\ 1 & 2 & 4 \\ 1 & 1 & 3 \end{bmatrix}$  are 3 and 2. Find the third one?
3. Find the Direction ratio and Direction cosine of the normal to the plane  $\frac{x}{3} + \frac{y}{4} - \frac{z}{2} = 1$ .
4. Find the angle between the planes  $x - y + z + 1 = 0$  and  $2x + 7y + 5z - 7 = 0$ .
5. Define Evolute.
6. Find the envelope of the curve  $y = mx + \frac{a}{m}$  where  $m$  is the parameter.

7. If  $u = x^2 + y^2 + z^2$  prove that  $x \frac{\partial u}{\partial x} + y \frac{\partial u}{\partial y} + z \frac{\partial u}{\partial z} = 2u$ .
8. If  $x = u(1+v)$  and  $y = v(1+u)$  find  $\frac{\partial(x,y)}{\partial(u,v)}$ .
9. Find the particular integral of  $(D^2 + 4) = \cos 2x$ .
10. Reduce the equation  $x^2 \frac{d^2 y}{dx^2} + 4x \frac{dy}{dx} + 2y = \sin(\log x)$ .

**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) Find the characteristic equation of
- $$A = \begin{bmatrix} 1 & -1 & 2 \\ -2 & 1 & 3 \\ 3 & 2 & -3 \end{bmatrix}$$
- and verify Cayley Hamilton Theorem.

Or

- (b) Find all eigen values and eigen vector for the
- $$\text{Matrix } A = \begin{bmatrix} -2 & 2 & -3 \\ 2 & 1 & -6 \\ -1 & -2 & 0 \end{bmatrix}.$$

12. (a) Find the equation of the plane passes through the points  $(1,2,-1)$  and  $(2,1,1)$  and perpendicular to the plane  $x - 2y + 5z + 3 = 0$ .

Or

- (b) Show that the plane  $2x - 2y + z = 9$  touches the sphere  $x^2 + y^2 + z^2 + 2x + 2y - 7 = 0$  and find the point of contact.



13. (a) Find the radius of curvature at the point  $(0, c)$  on the curve  $y = c \cosh\left(\frac{x}{c}\right)$ .

Or

- (b) Find the envelope of the family of lines  $\frac{x}{a} \cos \theta + \frac{y}{b} \sin \theta = 1$  where  $\theta$  being the parameter.
14. (a) If  $Z = f(x, y)$  where  $x = r \cos \theta$  and  $y = r \sin \theta$  then show that  $\left(\frac{\partial z}{\partial x}\right)^2 + \left(\frac{\partial z}{\partial y}\right)^2 = \left(\frac{\partial z}{\partial r}\right)^2 + \frac{1}{r^2} \left(\frac{\partial z}{\partial \theta}\right)^2$ .

Or

- (b) Find the maxima and minima of  $xy(a - x - y)$ .
15. (a) Solve  $(D^2 + 6D + 8)y = \cos^2 x$ .

Or

- (b) Solve  $x^2 \frac{d^2 y}{dx^2} + 4x \frac{dy}{dx} + 2y = x \log x$ .

**Part C**

$(3 \times 10 = 30)$

Answer **all** questions.

16. (a) Reduce the quadratic form  $2x^2 + 5y^2 + 3z^2 + 4xy$  to the Canonical form by orthogonal reduction and state its nature.

Or

- (b) Find the equation of the sphere that passes to the circle  $x^2 + y^2 + z^2 + 3x + y + 2z - 2 = 0$ ,  $x + 3y - 2z + 1 = 0$  and cuts orthogonally the sphere  $x^2 + y^2 + z^2 + x - 3z - 2 = 0$ .

17. (a) Find the evolute of the parabola  $y^2 = 4ax$ .

Or

(b) Expand  $e^x \log(1+y)$  in powers of  $x$  and  $y$  upto third terms.

18. (a) Solve  $\frac{d^2y}{dx^2} + y = \sec x$  by the method of variation of parameters.

Or

(b) Show that the lines  $\frac{x-1}{1} = \frac{y+1}{1} = \frac{z-1}{-2}$  and  $3x + 2y - 3z - 5 = 0 = 5x + 4y - z - 7$  are coplanar. Find their point of intersection and the equation of the plane containing them.

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**C-7027**

**Sub. Code**

**11814**

**B.Sc. DEGREE EXAMINATION, NOVEMBER 2022**

**First Semester**

**Aeronautical Science**

**WORKSHOP PRACTICES**

**(2016 onwards)**

Duration: 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. What are the three elements of Fire?
2. How are Fire extinguisher markings are done?
3. What is a Screw Driver?
4. Name the different types of punches commonly used.
5. What is tube Micrometer?
6. What is a Slip gauge?
7. Define Tolerance.
8. Define Interference.
9. What is an Engine Lathe?
10. Write down the various classifications of Milling Machines.

**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) What rules govern the safe use of wrenches?

Or

- (b) Discuss the extinguishing agents which are not recommended for aircraft use.

12. (a) Name some common power tools. Write down its benefits over hand tools.

Or

- (b) Briefly explain the calibration standards required in the workshops.

13. (a) Describe the operation of a Dial Test indicator.

Or

- (b) What are some of the uses of inside calipers?

14. (a) Explain the difference between the allowance and clearance.

Or

- (b) Name and describe several types of drills.

15. (a) Describe the various types of Engine lathes.

Or

- (b) Compare between plain and universal Milling machine.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Discuss briefly about various fire extinguishing agents.

Or

- (b) What are hard and soft hammers? Mention its uses.

17. (a) Explain briefly about the T-socket Wrench.

Or

- (b) What are some of the requirements of a precision measuring instruments?

18. (a) State the importance of limits and fits in large scale production. Describe any of setting limits and fits you know.

Or

- (b) State the operations which may performed on a lathe.

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**C-7028**

**Sub. Code**

**11815**

**B.Sc. DEGREE EXAMINATION, NOVEMBER 2022.**

**First Semester**

**Aeronautical Science**

**BASIC ELECTRICITY AND ELECTRONICS**

**(2016 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. State Ohm's law.
2. What is the purpose of laminating the core in a transformer?
3. Write down the EMF equation of a single phase transformer.
4. Draw the circuit for DC compound motor.
5. Define overall efficiency of an induction motor.
6. Why single phase induction motor has low power factor?
7. Define Capacitor.
8. What is meant by junction transistor?
9. How is voltage adjusted when a transistorized voltage regulator is used?
10. What is the advantage of a static inverter?

**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) Describe the series combination of resistance.

Or

- (b) Comparison between of core and shell transformer.

12. (a) Explain the working operation of D.C. motor.

Or

- (b) Explain the types of generators.

13. (a) State the different types of d.c. generators and state the application of each type.

Or

- (b) Explain the characteristics of d.c. series motor.

14. (a) Describe any two electronic measurement devices.

Or

- (b) Explain the Field Effect transistor.

15. (a) Describe the types of thyristors.

Or

- (b) Explain the purpose of an inverter.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Derive an expression of simple RC circuit with neat diagram.

Or

- (b) Draw a power flow diagram of a 3 phase induction motor and explain all the stages.

17. (a) Explain with their types of MOSFET.

Or

(b) Explain short note on types of transformer.

18. (a) Explain with neat sketch of half and full wave rectifier.

Or

(b) With a neat diagram, Explain the construction and principle of operation of DC generator.

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**C-7023**

**Sub. Code**

**91421/22**

**U.G. DEGREE EXAMINATION, NOVEMBER 2022.**

**Second Year – Second Semester**

**Part II – English**

**PROSE, EXTENSIVE READING AND COMMUNICATION  
SKILLS**

**(Common for all UG Degree Courses)**

**(2016 onwards to 2018 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. What is Forster's attitude towards Mr. Rumble?
2. How long did it take to make orthosis 300 gm callipers?
3. When did Indians first have the vision of freedom?
4. How did Gandhi become enshrined?
5. How was Lynd converted to nationalism?
6. What is discipline of reality?
7. What is the function of an adverb?
8. Give two example of pronouns.
9. Give two examples of demonstrative pronouns
10. What are three types of conjunctions?

**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) Write brief note on Dr. Kalam's third vision.

Or

- (b) What are the two ways in which science benefits man?

12. (a) How does Nehru close his speech?

Or

- (b) What is discipline of reality? How does a child learn realities?

13. (a) Comment on the theme of *After Twenty Years*.

Or

- (b) Write the note on the character sketch of the astrologer.

14. (a) Fill in the blanks by adding adverbial clauses.

(i) You will win his favour \_\_\_\_\_.

(ii) \_\_\_\_\_ he is strong.

(iii) This is good \_\_\_\_\_.

(iv) \_\_\_\_\_ we must try.

(v) We eat \_\_\_\_\_.

Or

- (b) Define types of pronouns with examples.

15. (a) Change into Direct speech:
- (i) Shivani asked me how I could lift it.
  - (ii) Leela ordered her servant not to clean it.
  - (iii) He said that Kevin should come.
  - (iv) She said that rain had fallen last night.
  - (v) He asked me where I lived.

Or

- (b) Write a short note on three types of comparisons.

**Part C** (3 × 10 = 30)

Answer **all** questions.

16. (a) Write an essay on the conflict between the state and the artist.

Or

- (b) Write about Dr. Kalam's contribution to Indian education.

17. (a) Sum up Plato's contradictory views on the artist's role in society.

Or

- (b) How does Nehru react to Gandhi's death? How does he finally reconcile himself to it?

18. (a) Explain Pronoun and its kinds with example.

Or

- (b) Write short notes on adverbial clauses and its types with examples.

<b>C-1703</b>
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<b>Sub. Code</b>
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<b>11823</b>
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**B.Sc. DEGREE EXAMINATION, NOVEMBER 2022 .**

**Second Semester**

**Aeronautical Science**

**MATHEMATICS - II**

**(2016 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Evaluate  $\int_1^2 \int_0^{x^2} x \, dy \, dx$
2. Express the region  $x \geq 0, y \geq 0, z \geq 0, x^2 + y^2 + z^2 \leq 1$  by triple integration.
3. Define solenoidal vector.
4. Define line integral of a vector point function.
5. Check whether  $w = \bar{z}$  is analytic everywhere.
6. Find the real and imaginary parts of  $f(z) = 2z^3 - 3z$ .
7. Write the value of  $t * e^t$ . Using convolution theorem.
8. Find the Laplace transform of  $\cosh at$ .
9. Define Rank correlation.
10. Define Standard deviation.

**Part B****(5 × 5 = 25)**Answer **all** questions.

11. (a) Evaluate  $\iint xy \, dx \, dy$  over the positive quadrant of the circle  $x^2 + y^2 = a^2$ .

Or

- (b) Evaluate  $\int_0^1 \int_0^2 e^{x+y} \, dx \, dy$ .

12. (a) If  $\vec{f} = 3xy\vec{i} - y^2\vec{j}$ , evaluate  $\int_C \vec{f} \cdot d\vec{r}$ , where  $C$  is curve in the  $xy$  plane  $y = 2x^2$ , from  $(0,0)$  to  $(1,2)$ .

Or

- (b) Find the area of a circle of radius 'r' using Green's theorem.

13. (a) If  $f(z) = u + iv$  be an analytic function, prove that  $u$  satisfies the Laplace equation.

Or

- (b) Show that  $u = 3x^2y - y^3$  is a harmonic function.

14. (a) Find the Laplace transform of  $t e^{2t} \sin 3t$ .

Or

- (b) Find  $L^{-1} \left[ s \log \left( \frac{s+1}{s} \right) \right]$ .

15. (a) Find the variance of the following data:

6, 8, 10, 12, 14, 16, 18, 20, 22, 24

Or

- (b) If  $\theta$  is the angle (acute between the two regression lines), Prove that  $\sin \theta \leq 1 - r^2$ .

**Part C** $(3 \times 10 = 30)$ Answer **all** questions.

16. (a) Evaluate  $\int_0^3 \int_1^{\sqrt{4-y}} (x+y) dx dy$  by changing the order of Integration.

Or

- (b) Evaluate  $\int_c (yzdx + zxdy + xydz)$  by using Stoke's theorem Where C is the curve  $x^2 + y^2 = 1, z = y^2$ .
17. (a) Show that the function  $u = x^3 + x^2 - 3xy^2 + 2xy - y^2$  is harmonic and find the corresponding analytic function  $f(z) = u + iv$ .

Or

- (b) Find the bilinear transformation which maps the points  $z = 0, z = 1$  and  $z = \infty$  into the points  $w = i, w = 1$  and  $w = -i$ .
18. (a) Solve  $y(t) = t^2 + \int_0^t \sin(t-u) du$ .

Or

- (b) Find mean deviation about the mean for the following data.

$x_i:$	2	5	6	8	10	12
$f_i:$	2	8	10	7	8	5

**C-7029**

**Sub. Code**

**11824**

**B.Sc. DEGREE EXAMINATION, NOVEMBER 2022.**

**Second Semester**

**Aeronautical Science**

**ENGINEERING MECHANICS AND STRENGTH OF  
MATERIALS**

**(2016 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Define Equivalent force.
2. State moment of force.
3. Explain the principle of transmissibility.
4. Define center of gravity.
5. Define mechanical efficiency
6. Define co-efficient of friction.
7. When the frame is identified as deficient frame.
8. Define cantilever trusses.
9. Define factor of safety.
10. Define mohr's circle.

**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) Write a short note on parallelogram law of forces.

Or

- (b) Four forces are acting on a particle. The magnitude of the forces are 250N, 5800N, 800N and P and their respective angles with the horizontal are  $0^\circ$ ,  $75^\circ$ ,  $150^\circ$ ,  $225^\circ$ ,  $300^\circ$ . If the vertical component of all the forces are 900N. Find the value of P. Also calculate the magnitude and direction of the resultant assuming that the first force acts towards the point, while all the remaining forces act away from the point.
12. (a) Explain the inertia forces in rotation with a diagram.

Or

- (b) Explain the following:
- (i) Moment of couple
  - (ii) Moment of inertia
13. (a) Explain friction on Journal Wedges.

Or

- (b) Explain Law of dynamic friction.
14. (a) Explain about the classification of frame.

Or

- (b) Differentiate between perfect and imperfect frames.



15. (a) Explain the following:  
(i) Principal strain.  
(ii) Poisons Ratio.

Or

- (b) Write the procedure to solve the beam to draw the shear force and bending moment diagram.

**Part C** (3 × 10 = 30)

Answer **all** questions.

16. (a) Explain the principle of virtual work.

Or

- (b) Define the following:  
(i) Concurrent and non-concurrent  
(ii) Parallel and non-parallel

17. (a) Explain resolution of forces using method of sections.

Or

- (b) Write a short note on,  
(i) Inertia force in rotation  
(ii) Rigid body motions.

18. (a) Explain about static and dynamic coefficient of friction.

Or

- (b) A closely coiled helical spring is to carry a load of 700 N. Its mean coil diameter is to be 10 times that of the wire diameter. Stiffness of the spring is 19 N per mm deflection and modulus of rigidity =  $800 \times 10^4$  N/mm<sup>2</sup>. Calculate these diameters if the maximum shear stress in the material of the spring is to be 80 N/mm<sup>2</sup> and find the number of coils in the spring.

**C-7030**

**Sub. Code**

**11832**

**B.Sc. DEGREE EXAMINATION, NOVEMBER 2022**

**Third Semester**

**Aeronautical Science**

**THERMODYNAMICS**

**(2016 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Define Thermodynamic system.
2. State Zeroth Law of thermodynamics.
3. Write the ideal gas equation and its importance.
4. Define refrigerant
5. State Avogadro's Law.
6. Define Internal Energy.
7. What is the role of intercooler in air compressor?
8. List out the basic components of centrifugal compressors.
9. Write the basic concept of piston engine principles.
10. What is the difference between open and closed cycle gas turbine?

**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) What is steady flow process and its applications in engineering?

Or

- (b) Write short notes on heat transfer modes.

12. (a) List out the assumptions made for air standard cycle.

Or

- (b) Write short notes on Refrigeration Process.

13. (a) List out the properties of mixture of gases.

Or

- (b) Write short notes on Calorific values of fuels.

14. (a) Write the two basic types of Air compressors.

Or

- (b) Write short notes on Centrifugal impeller.

15. (a) Write the classification of gas turbines and its significance.

Or

- (b) What are the advantages of turbo propeller engine?

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) What are the points to remember regarding heat transfer and work transfer?

Or

- (b) Prove that Energy- A property of the system?

17. (a) Derive the efficiency of Diesel Cycle with neat sketch.

Or

- (b) Derive the Entropy change of an ideal gas.

18. (a) Briefly discuss about the Axial Flow Compressor.

Or

- (b) Write notes on rocket propulsion.
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**C-7031**

**Sub. Code**

**11833**

**B.Sc. DEGREE EXAMINATION, NOVEMBER 2022**

**Third Semester**

**Aeronautical Science**

**FLUID MECHANICS AND HYDRAULIC MACHINES**

**(2016 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Define pressure.
2. What do you mean by hydrostatic law?
3. Define the terms 'Metacentre' and 'Metacentric height'.
4. Define steady flow.
5. State Bernoulli's theorem.
6. Write down the major energy loss in pipes.
7. Define the term: impact of jets.
8. How will you classify the reciprocating pumps?
9. Name any four hydraulic devices.
10. What is the need of accumulator in hydraulic system?

**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) Calculate the density, specific weight and weight of one litre of petrol of specific gravity of 0.7.

Or

- (b) The right limb of a simple U-tube Manometer containing mercury is open to the atmosphere while the left is connected to a pipe in which a fluid of specific gravity 0.9 is flowing. The centre of the pipe is 12 cm below the level of mercury in the right limb. Find the pressure of fluid in the pipe if the difference of mercury level in the two limbs is 20 cm.

12. (a) What are the conditions of equilibrium of a floating body and a submerged body?

Or

- (b) Derive an expression for the force exerted on a submerged inclined plane surface by the static liquid.

13. (a) What is a pitot tube? How will you determine the velocity at any point with the help of pitot tube.

Or

- (b) What is a syphon? On what principle it works?

14. (a) Obtain an expression for the force exerted by a jet of water on a fixed vertical plate in the direction of the jet.

Or

- (b) Define the terms : Hydraulic machines, Turbines and pumps.
15. (a) What is a hydraulic intensifier? Explain its principle and working.

Or

- (b) With a neat circuit diagram, explain the working of a pneumatic system.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) State and prove Pascal's law.

Or

- (b) Define the equation of continuity obtain an expression for continuity equation for a three dimensional flow.
17. (a) Find an expression for the power transmission through pipes.

Or

- (b) Define a centrifugal pump. Explain the working of a single stage centrifugal pump with a neat sketch.

18. (a) Differentiate between a hydraulic ram and a centrifugal pump. Obtain an expression for the efficiencies of the hydraulic ram.

Or

- (b) Derive the momentum equation.
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**C-7032**

**Sub. Code**

**11834**

**B.Sc. DEGREE EXAMINATION, NOVEMBER 2022.**

**Third Semester**

**Aeronautical Science**

**AERODYNAMICS AND HELICOPTER THEORY**

**(2016 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Define centre of pressure.
2. Define Bernoulli's principle.
3. What is mean aerodynamic centre?
4. What is the result of flap deflection?
5. What is coriolis effect?
6. Define Autorotation.
7. What is the main role of the main rotor mask?
8. What are the flight controls of a helicopter?
9. What are types of helicopter tail rotor?
10. What is a Freewheeling unit?

**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) Discuss in detail about the airfoil characteristics.  
Or  
(b) What are the factors which are contributing lift generation?
12. (a) Write down the fundamental equation of drag? Explain the importance of L/D ratio.  
Or  
(b) With a neat sketch, explain the functions of primary control surfaces.
13. (a) Explain in detail about disymmetry of lift.  
Or  
(b) Discuss about the translational lift.
14. (a) Explain in detail about the different types of rotor blades.  
Or  
(b) Mention the procedure used for the maintenance of rotor head.
15. (a) Discuss the pitch changing mechanism of a helicopter.  
Or  
(b) Write a short notes on Freewheeling units.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) What do the following symbols indicate: AR, C<sub>D</sub>, C<sub>L</sub>, D, L, S, V.  
Or  
(b) Discuss about the longitudinal and lateral stability of an aircraft.

17. (a) Explain in detail about Blade flapping and coning.

Or

(b) Explain in detail about the stabilizer bar.

18. (a) Describe about the tail rotor drive shaft.

Or

(b) Define blade tracking. Explain any two methods of blade tracking in detail.

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**C-7033**

**Sub. Code**

**11835**

**B.Sc. DEGREE EXAMINATION, NOVEMBER 2022**

**Third Semester**

**Aeronautical Science**

**AIRCRAFT CONSTRUCTION**

**(2016 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Write about sandwich construction.
2. Describe failsafe design.
3. Write the primary control surfaces and their respective axis of control.
4. What is the purpose of aileron?
5. What is trunnion?
6. What are the types of brakes?
7. What is TEMAC and LEMAC?
8. Define gross weight and empty weight.
9. Define aircraft rigging.
10. What is dihedral angle?

**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) Write in detail about semi monocoque structure.

Or

- (b) Explain in detail about honeycomb structure.

12. (a) What is the procedure for inspection of the control surface?

Or

- (b) How the differential aileron control is achieved?

13. (a) Explain about the nose wheel steering system.

Or

- (b) Write in detail about landing gear position indicator system.

14. (a) Write about the calculation for empty weight of C.G.

Or

- (b) Write things needs to done to prepare the aircraft for weighing.

15. (a) Briefly in explain about the levelling of an aircraft.

Or

- (b) Write a note on hulls and float with suitable diagram.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Write in detail about power assisted controls.

Or

- (b) Explain about power boost brake system.

17. (a) (i) What is the purpose of the follow up differential mechanism in a nose wheel steering system?  
(ii) Explain in detail about shimmy dampers types and inspection.

Or

- (b) Explain in detail about the flight control surface rigging.

18. (a) Explain about following  
(i) Flaps  
(ii) Rudder.

Or

- (b) Discuss about incident and dihedral angle alignment check.
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C-1709
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Sub. Code
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11842
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**B.Sc. DEGREE EXAMINATION, NOVEMBER 2022**

**Fourth Semester**

**Aeronautical Science**

**AIRCRAFT SYSTEMS**

**(2016 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. State Pascal's Law.
2. What is the function reservoir and state its type?
3. Explain the variable restrictor valve.
4. Write short note on Anoxia.
5. Name five basic requirements for cabin pressurization and air-conditioning system.
6. List down the methods used for control of ice formation in aircraft.
7. Differentiate rime ice and Glaze ice.
8. What is vapor lock in aircraft fuel system?
9. What is the purpose of booster pump in fuel system?
10. Describe fuel cooled oil cooler.

**Part B****(5 × 5 = 25)**Answer **all** questions.

11. (a) State the advantages and disadvantages of hydraulic system.

Or

- (b) Describe various types of Hydraulic fluids with its properties.

12. (a) Describe the function of pneumatic pressure regulator with sketch.

Or

- (b) State the advantages and disadvantages of pneumatic system over hydraulic system.

13. (a) Describe the composition of Atmosphere.

Or

- (b) Briefly explain the Air ducts.

14. (a) Briefly explain deicing system. Describe the deicer boot.

Or

- (b) Describe the icing effects on the aircraft and how it is protected from ice?

15. (a) Briefly explain Light aircraft gravity fuel feed system.

Or

- (b) Write short note on:

- (i) Fuel jettison system  
(ii) Fuel cross feed system.



**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Briefly explain hydraulic reservoir with neat sketch.

Or

- (b) Describe the Fluid Contamination check and contamination control methods.

17. (a) Briefly explain various sources of Pneumatic pressure.

Or

- (b) Briefly explain the vapour cycle system.

18. (a) Describe various types of aircraft fuel tanks.

Or

- (b) Briefly explain the Rain elimination system by various methods.
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<b>C-1710</b>
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<b>Sub. Code</b>
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<b>11843</b>
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**B.Sc. DEGREE EXAMINATION, NOVEMBER 2022**

**Fourth Semester**

**Aeronautical Science**

**AIRCRAFT INSTRUMENTS**

**(2016 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Write about the different types of displays.
2. Explain about the importance of Light-Emitting Diode.
3. Write short notes on location on probes and static vents.
4. What do you mean by "Pressure Error" of an air data system and how its effects are minimised?
5. Define Gyroscope and its Properties?
6. Define Gimbal Lock and Gimbal Error.
7. What do you mean by Seebeck Effect and Thomson Effect?
8. What adjustments are normally provided in a capacitance type fuel quantity indication system?
9. What are the laws of magnetism?
10. Define Magnetic Variation and Magnetic Meridian.

**Part B****(5 × 5 = 25)**Answer **all** questions.

11. (a) Explain about the Head-Up Display and how flight data is displayed to pilot.

Or

- (b) Define about the grouping of instruments and explain about its layout.

12. (a) Explain about the working principle of Altimeter and explain about the Q- codes.

Or

- (b) Why Mach meter is necessary when there is Air Speed Indicator? And explain its working principle.

13. (a) Explain briefly about the methods of controlling

- (i) Apparent drift
- (ii) Transport Wander

Or

- (b) What is the working principle and constructional feature of Artificial Horizon?

14. (a) Explain in detail about the construction of Torque Pressure Indicator.

Or

- (b) What is the basic principle of Wheatstone bridge and how it is used for measuring fuel flow?

15. (a) What are the procedures involved in Calibration of DR Compass?

Or

- (b) Give an account on different types of compasses and its constructional features.

**Part C****(3 × 10 = 30)**Answer **all** questions.

16. (a) Explain about the principle and constructional features of the following.
- (i) Director displays
  - (ii) Liquid Crystal Display

Or

- (b) With the aid of diagram, explain about the different types of Pitot heating arrangement system.
17. (a) Explain in detail about how a rate gyroscope can be utilized for sensing both banking and rate of turn.

Or

- (b) Explain in detail about the working principle of capacitance type fuel quantity indicator.
18. (a) Explain about the Acceleration and Turing Errors in detail.

Or

- (b) Explain in detail about the role of Altitude Alerting System and Mach Warning Systems.
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C-1711
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Sub. Code
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11844
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**B.Sc. DEGREE EXAMINATION, NOVEMBER 2022**

**Fourth Semester**

**Aeronautical Science**

**AIRCRAFT MATERIALS, HARDWARE AND NDT**

**(2016 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Define ferrous metals.
2. Define quenching.
3. Write various process of heat treatment.
4. Define corrosion. Write any two types of corrosion.
5. What are the types of wood used in Aircrafts?
6. List out the various hardware components in Aircraft.
7. Define graphite fiber.
8. List out the advantages of sandwich composite material.
9. Define Tensile test.
10. Write any four types of NDT method.

**Part B****(5 × 5 = 25)**Answer **all** questions.

11. (a) Write the difference between Ferrous and Non-Ferrous metals with example.

Or

- (b) Write the properties of
- (i) Carbon
  - (ii) Nickel

12. (a) Explain about Glue used in Aircraft materials.

Or

- (b) Brief notes on
- (i) Bolts
  - (ii) Nuts used in aircraft construction

13. (a) Explain in detail about Thermosetting plastics.

Or

- (b) Explain about Honey comb construction in composite material.

14. (a) Explain with neat sketch about Metal spraying.

Or

- (b) Explain about Honey Comb Construction.

15. (a) Explain the procedure on Impact test (with sketch).

Or

- (b) Brief notes about Ultrasonic Inspection with diagram.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain in detail about Heat Treatment process on Ferrous metals.

Or

- (b) (i) Explain about composite material.  
(ii) Write the notes about Glass fiber and Aramid fiber.
17. (a) Define Corrosion. Explain about
- (i) Metal spraying  
(ii) Electroplating.

Or

- (b) With neat sketch Explain about Brinell and Rockwell test.
18. (a) (i) Write about the notes on Sandwich Construction in composite material.  
(ii) Write the properties of
- (1) Aluminium  
(2) Copper.

Or

- (b) Explain about
- (i) Magnetic flux Inspection  
(ii) Eddy current inspection.

**C-7034**

**Sub. Code**

**11851**

**B.Sc. DEGREE EXAMINATION, NOVEMBER 2022**

**Fifth Semester**

**Aeronautical Science**

**AIRCRAFT RULES AND AIRWORTHINESS  
REGULATIONS**

**(2016 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. List out the compliance procedure in aircraft rules 1937.
2. Write the significance of Numbering of CAR.
3. What is identification plate?
4. What is BAMEC and its significance?
5. Define Maintenance.
6. What do you mean by approved organisation?
7. Define Series Aircraft.
8. What is Flight Data Recorder?
9. Define fuelling.
10. Write the importance of positioning of fueling equipment.



**Part B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) List out various series of airworthiness in CAR.

Or

- (b) Write short notes on aircraft logbook.

12. (a) List out the certification privileges of AME license in Category “A”.

Or

- (b) Write short notes on Change of ownership of aircraft.

13. (a) Explain the review of defect reported in aircraft.

Or

- (b) Write short notes on MMEL.

14. (a) List out the routine test flight procedure.

Or

- (b) Write short notes on TCAS.

15. (a) List out the specific precautions in case of fuel mixture.

Or

- (b) Write short notes on aircraft fuelling vehicle.

**Part C**

(3 × 10 = 30)

Answer **all** questions.

16. (a) Write the format of log book for scheduled operators.

Or

- (b) Write short notes on
- (i) Carriage of log books on board
  - (ii) Preservation of log books.
17. (a) List out the procedures for renewal of AME License.

Or

- (b) Write the classifications of major defects.
18. (a) Write the flight crew requirements for test flight.

Or

- (b) Explain the servicing and maintenance of aircraft during fuelling.
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