



महाराष्ट्र शासन

शासकीय अभियांत्रिकी व संशोधन महाविद्यालय, अवसरी खुर्द
तालुका - आंबेगाव, जिल्हा - पुणे - ४१२४०५

दूरध्वनी क्र. : ०२१३३-२३०५८२

संकेतस्थळ : www.gcoeara.ac.in

ई मेल: office.gcoeavasari@temaharashtra.gov.in

जा.क्र.शाअसंमअ /परीक्षा विभाग /२०२३ / ५१४

दिनांक:-

प्रति,
मा. परीक्षा नियंत्रक,
सावित्रीबाई फुले पुणे विद्यापीठ,
पुणे- ४११००७

1 FEB 2023

विषय:- शासकीय अभियांत्रिकी व संशोधन महाविद्यालय, अवसरी (खुर्द), केंद्र क्र. ४०७८ येथील परीक्षा कक्षातील
एका विद्यार्थ्याचे कॉपी प्रकरण सादर करणेबाबत...

मा. महोदय,

उपरोक्त विषयानुसार आपणास कळविण्यात येते की, दि. ०१/०२/२०२३ रोजी "SE CIVIL (2019 PAT)" डिसेंबर-२०२२ परीक्षेच्या दरम्यान Engineering Geology (207009) या विषयाचे एका विद्यार्थ्याचे कॉपी केस प्रकरण विद्यापीठ बाह्य भरारी पथक यांच्या नजरेस आले व सदरचे प्रकरण सर्व विहित नमुन्यातील मुळ कागदपत्रांसह आपणाकडे पुढील कार्यवाहीसाठी पाठवित आहोत. विद्यार्थ्याचा तपशील खालीलप्रमाणे.

अ.क्र.	विद्यार्थ्याचे नाव	विषयाचे नाव	परीक्षा आसन क्र.	अहवाल देणाऱ्या कनिष्ठ पर्यवेक्षकाचे नाव
१	कु. शेळके आदित्य संतोष	Engineering Geology (207009)	S190780056	श्री. एस. डी. पाटील

धन्यवाद,



01-2-23
प्राचार्य
PRINCIPAL
शासकीय अभियांत्रिकी व संशोधन महाविद्यालय,
अवसरी (खुर्द) ता. आंबेगाव, जिल्हा: पुणे.
Tal. Ambegaon, Dist. Pune
S. V. Shrinagar

Q.8 Describe any two geological conditions leading to natural springs. [SPU: May-17, Marks 7, Dec-19, Marks 5] Ans.:

- 1) A spring is the result of an aquifer being filled to the point that the water overflows on to the land surface, which flows only after much rain to huge pools flowing hundreds of millions of gallons daily.
- 2) Springs may be formed in any sort of rocks. Small ones come out of rocks. Small ones are found in many places. The largest springs are formed in limestone and dolomite.
- 3) When weak carbonic acid (formed by rain water percolation through organic matter of soil) enters these fracture it dissolve bedrock forming space of spring.
- 4) As the process continues, the water hollows out more rocks, eventually admitting an air space at that point the spring stream can be formed.

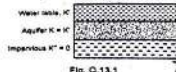
Q.10 Describe with neat sketches different geological conditions promoting natural discharge of water. [SPU: May-17, Marks 5, Dec-19, Marks 6]

- Ans.: The main source of ground water is rainfall. Recharge and discharge of water is totally related to hydrological cycle.
- The water which is exposed to sunlight gets evaporated and forms as cloud that is condensation. When these clouds are reacted with atmosphere it precipitates as a rainfall. This water which is called as surface runoff may form as a river, ponds, lakes and then some of the water gets absorbed in the rocks and stored as ground water. This ground water is later discharged for various purposes. But in some areas it is naturally discharged as springs. Geysers and perched water tables. Springs are again formed in various geological conditions. They are

6.8: Types of Aquifers

Q.13 Write a note on types of aquifers. [SPU: May-18, Marks 6, Dec-18, Marks 7]

- Ans.: Aquifer:
- Any geological formation that is water bearing is called as an aquifer.
 - The aquifers are classified based on the nature and distribution of water bearing zones, aquifers could be classified into four types.
1. Unconfined aquifer Water table aquifer: It is a permeable bed saturated with water table serves as the upper surface of zone of saturation. It is also called as water table aquifers.
 2. Confined aquifer (Artesian): It is a completely saturated aquifer which is underlain and overlain by impervious layers.



3. Perched aquifer: It is a completely saturated aquifer which is underlain and overlain by impervious layers.
 4. Artesian aquifer: It is a completely saturated aquifer which is underlain and overlain by impervious layers.
- The pressure of water is higher than that of the atmosphere. The water in wells stand above the top of the aquifer rather than storage changes.
- The confined aquifers exhibit only minor changes in storage and act as conduits from zones of recharge to those of discharge.

Q.16 Define circle of influence. [SPU: May-19, Marks 3]

OR Define radius of influence.

- Ans.: Radius of influence:
- The area influenced by the cone of depression is called the area of influence and its radius is called as the radius of influence. The circle with radius of influence is called circle of influence.
 - Refer figure from Q.14.

6.11: Conservation of Ground Water

Q.17 Discuss various methods of conservation of ground water. [SPU: May-18, Marks 7]

- Ans.: The various methods of conservation of ground water are explained as follows:
1. Protection of water from pollution
 - The water which is available at present on the earth can be sufficient to meet the drinking water needs of the existing population, if water is not polluted.
 - To prevent water pollution, the important water sources must be placed away from places of disposal of wastes and the industry units should dispose off their waste water after its treatment.
 - The activities of bathing and washing should be away from sources of drinking water and to be protected from weeds.
 - The water should be re-usable after physical, chemical, mechanical and organic processing methods. Generally the most important aspect of conservation of water is to control water pollution.
 2. Rational use of ground water
 - The ground water comprises 25% of total water supply in the world and its demand increases with quality available by which ground water quantity reduces.

Ans.: Building stones are the products of rocks which are construction purpose such as dams, buildings, bridges material used for construction includes.

- Building stones: In the form of masonry blocks.
- Rubble: In the form of small irregular fragments.
- Crushed stones: To make concrete.
- Limestone: To make lime and cement.
- Various parameters of a good building stone are explained follows:
- Mineral composition: The rock is an aggregate of mine rock is made up of high grade minerals then it is likely to be durable. If the rock is made up of low grade minerals mica, chlorite, talc etc. then the rock is not durable.
- Texture and structure: The fine grained rocks are stronger and stronger than the coarse grained rocks. The stratification, lamination may bear greater load if they are in construction parallel to the planes of weakness. structure are subjected to weathering and hence such better avoided in the civil engineering projects.
- Porosity and permeability: The porosity of the rock is the volume occupied by pores to the total volume of sample. A less porous rock is more durable and strong can be used for the construction.
- Permeability: The capacity of the rock to transmit indicates the ease with which water can percolate through cracks of the rocks. The permeable rocks are not so fast they cause seepage of water which may lead to destructive structure.
- Durability: The durability of a rock is its capacity to original size, strength and appearance throughout its life. The durability of the rock is directly related to its composition and texture. The rocks which are weathering and decay loses the strength early.

Holocraft Sticker

Examination	End Sem Exam 2022-23		
Day & Date	Wed - 1/02/2023		
Subject	Engineering Geology		
Paper No.		Sec -	
Medium of Answer	English		
Seat No. : In figure & In words	5190780056		
	S one nine zero		
	seven eight zero		
	zero five six.		
Signature of Candidate	<i>[Signature]</i>		
Signature of Jr. Supervisor	<i>[Signature]</i>		
Center No.	4078		

Holocraft Sticker

Instruction to Candidate

1. Candidate has to confirm seat number, subject and centre number printed on Bar code and Write it on attendance sheet.
विद्यार्थ्याने प्रथम बार कोडवरील आसन क्रमांक, विषय व केंद्र क्रमांक तपासून योग्य असल्याची खात्री करावी आणि उपस्थिती पत्रकावर नोंदवावी.
2. Paste Bar Code in prescribed space.
उत्तरपत्रिकेवरील विहित जागेतच बार कोड लावावा.
3. Do not write anything on bar code sticker, otherwise it will be treated as unfair means.
बार कोड स्टिकरवर काहीही लिहू नये, अन्यथा परीक्षा गैरप्रकार समजला जाईल.

Supplements attached		
Main Answer Book	No. of Supplements	Total
1	+	=

Specific remarks of Centre conductor regarding malpractice (in Red ink)
Copy Case Written Material found.

Total	Marks in Figure	Marks in Words	Sign
Examiner			
Moderator			

Q. No.	Examiner	Moderator
1		
2		
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7		
8		
9		
10		
11		
12		
Total in Figure		
Total in Words		
Signature		

... on the ground as a ... The solid products from ...
 ... fragments of various size. They are mostly thrown out ...
 ... scale easily.
 ... behind the vesicles but vesicles have does not allow gases ...
 ... lid products. The thrown out liquid material from volcano is ...
 ... and chlorine etc. The difference between magma and lava is ...
 ... or dioxide and some amount of hydrogen, carbon monoxide ...
 ... gases. They form nearly 90 % of total gas content. The gases ...

Q.2 What are earthquakes? Explain seismic waves in detail.
 [5] (2019, May-15, Marks 1)
 ... waves.
 ... Or How do earthquake waves affect to engineering projects?
 ... Explain.
 ... The energy release is mainly observed when two large rock masses ...
 ... Cases of earthquakes:
 ... • Some of the crucial movements are rapid and of short duration are ...
 ... called as tectonic processes which causes earthquakes.



Q.3 Landslides
 ... movement.
 ... The water is precipitated in soil and rock cracks. It works as a ...
 ... lubricant but also exerts additional forces leads to displacement ...
 ... occur after some ...
 ... water added weight to the material. Thus most of the time landslides ...
 ... in gorges where water freezes, it exerts an expansive force which ...
 ... (b) Slopes: Various kinds of slopes are observed causing the ...
 ... responsible for landslides. Steeper the slopes, greater is the ...
 ... Nature of rocks: The unconsolidated particles such as clays, sand ...
 ... all etc can not stand permanently along the slopes, greater the ...
 ... their angle of repose and are very sensitive to water. Greater this ...
 ... movable then it is the most favourable condition for landslides.

Holocraft Sticker

Seat No S190780056
 Stk. No 1983744
 Sub. EG
 Centre 4078

207009-EG

 Sem:3 7021911

Examination: End sem Exam 2022-23
 Day & Date: Wed - 1/02/2023
 Subject: Engineering Geology
 Paper No. Sec -
 Medium of Answer: English
 Seat No. : In figure & In words
 5190780056
 5 one nine zero
 seven eight zero
 zero five six
 Signature of Candidate: 
 Signature of Jr. Supervisor: 
 Center No. 4078

Instruction to Candidate

- Candidate has to confirm seat number, subject and centre number printed on Bar code and Write it on attendance sheet.
 विद्यार्थ्याने प्रथम बार कोडवरील आसन क्रमांक, विषय व केंद्र क्रमांक तपासून योग्य असल्याची खात्री करावी आणि उपस्थिती पत्रकावर नोंदवावी.
- Paste Bar Code in prescribed space.
 उत्तरपत्रिकेवरील विहित जागेतच बार कोड लावावा.
- Do not write anything on bar code sticker, otherwise it will be treated as unfairmeans.
 बार कोड स्टिकरवर काहीही लिहू नये, अन्यथा परीक्षा गैरप्रकार समजला जाईल.

Supplements attached		
Main Answer Book	No. of Supplements	Total
1	+	=

Specific remarks of Centre conductor regarding malpractice (in Red ink)
 Copy Case Written Material found 

Total	Marks in Figure	Marks in Words	Sign
Examiner			
Moderator			

Q. No.	Examiner	Moderator
1		
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10		
11		
12		
Total in Figure		
Total in Words		
Signature		

Total No. of Questions : 8]

SEAT No. :

PA-1183

[Total No. of Pages : 2

[5925]-205

S.E. (Civil Engineering)

ENGINEERING GEOLOGY

(2019 Pattern) (Semester-III) (207009)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) All questions are compulsory.
- 2) Figures to the right indicate full marks.
- 3) Neat diagrams must be drawn wherever necessary.

- Q1) a) Describe various types of unconformities with neat sketches. [6]
b) Explain sill and Dyke as igneous intrusions. [5]
c) Write short notes on: [6]
i) Symmetrical and asymmetrical folds.
ii) Strike and dip of rocks.

OR

- Q2) a) Explain various parts Fold and any three types of fold with neat sketches. [6]
b) Write short note on plate tectonic. [5]
c) Describe the classification of fault and their engineering significance. [6]

- Q3) a) What is the effects of faulting and their significance in civil engineering. [6]
b) Describe the application of remote sensing in civil engg. [6]
c) Describe photo interpretation elements of aerial photographs. [6]

OR

- Q4) a) Explain in detail the importance of preliminary geological exploration in civil engineering projects. [6]
b) Write an applications of GIS in civil engg. [6]
c) Explain any three methods of subsurface investigation. [6]

- Q5) a) Discuss in detail preliminary geological investigations of tunneling. [6]
b) What are the geological requirement for the foundation of dam? [6]
c) Discuss the feasibility of dam site, with dipping and horizontal strata. [6]

OR

P.T.O.

- Q6) a) A site is proposed for excavation of tunnel is A-B and M-N, which is passing through axis and limb region of fold respectively. Justify the suitability of tunnel in such conditions. [6]
- b) Explain with appropriate example the feasibility of dam alignment which is crossing DYKE. [6]
- c) Write a note on the dam located on folded geological structure. [6]
- Q7) a) Describe different types of seismic waves in detail. [6]
- b) What is landslides? What are the causes of it? [5]
- c) Define Aquifers. Explain in short the types of aquifers. [6]
- OR
- Q8) a) Write a note on building stones. [6]
- b) What are the causes of an earthquakes. [5]
- c) Explain the Geological conditions favorable for natural springs and artesian wells. [6]



Savitribai Phule Pune University



(Formerly University of Pune)

HallTicket For S.E.(2019 PAT.)(CIVIL) Oct/Nov 2022

SeatNo	PRN	CentreCode	CollegeCode	PUN Code
S190780056	72211246H	78	78	CEGP014980

Name : SHELKE ADITYA SANTOSH

Mother : MANGAL

Centre : GOVT.COLLEGE OF ENGINEERING,AWASARI,
KHURD,AMBEGAO



Sub Code	Subject Name	Type	Exam Date	Exam Time
201001	BUILDING TECH. & ARCH. PLANNING	[IN],[TH]		
201002	Mechanics of structure	[IN],[TH]	17/01/23	
201003	Fluid Mechanics	[IN],[TH]		
201004	BUILDING TECH. & ARCH. PLANNING LAB	[TW]		
201005	Mechanics of structure Lab	[OR]		
201006	Fluid Mechanics Lab	[OR]		
201007A	Awareness to civil Engineering Practices	[AC]		
207001	Engineering Mathematics III	[IN], [TH], [TW]		
207009	Engineering Geology	[IN],[TH]		
207010	Engineering Geology Lab	[TW]		

NOTE:

Students should ensure that details like Name,Photo, PRN, Subjects printed on Hall Ticket are correct. In case of any discrepancy, please immediately contact to College Exam Officer (CEO).

In Case,College does not have Exam Center,please follow University Circular.

In Case of any discrepancy between hallticket & time table published on university website (<http://exam.unipune.ac.in>), the timetable on website to be followed.

Signature of Student

Aditya Shelke

College Principal / Director

Head of Department
Department of Civil Engineering
Government College of Engineering and Research
Ambegaon, Khurd, Pune

GOVT.COLLEGE OF ENGINEERING,AWASARI,
KHURD,AMBEGAO

FORM OF UNDERTAKING

Full Name of the Candidate : Shelke Aditya Jankosh

Permanent/Local Address : Chombhut tal - Parner Dist - A.N. Nagar. 9011422900

TO, The Controller of Examinations, University of Pune Ganeshkhind, Pune-411 007.

51907080056

Sir, I, Shelke Aditya the undersigned, student of Civil engineering

College/Institution GCOEARAVASARI appearing for End semister Exam Examination (Engineering Geology) at the Government College of Engineering Avasari College (Centre) do hereby state on solemn affirmation as under :-

I understand that I am involved in respect of an alleged use of Unfair Means in the Examination Hall and therefore, a case against me is being reported to the University.

That in spite of the registration of a case of Unfair Means against me, I request the University authorities to allow me to appear in the present paper and the papers to be set subsequently and/or at the University Examination to be held hereafter.

In case my request is granted, I do hereby agree that my appearance in the examination will be provisional and subject to the decision of the University authorities in the matter of disposal of the case of alleged use of Unfair Means referred to above.

I also hereby agree that in the event of myself being found guilty at the time of investigation of the said case, my performance at the examination to which I have been permitted to appear provisionally, consequent upon my special request, is liable to be treated as null and void.

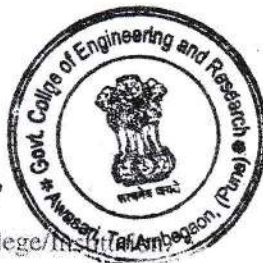
In witness where of I set my hand to this undertaking

Signature of the Candidate

Date : 1/02/2023

Before me

College Examination Officer Govt. College of Engg. and Research Avasari (Kurg) Dist. Pune - 412405



PRINCIPAL Govt. College of Engineering and Research Avasari

UNIVERSITY OF PUNE

Report of the Jr. Supervisor/Sr. Supervisor/Chief Conductor

Block No. : 03

Examination: End sem Exam Dec

Subject: Engg. Geology

Date: 1-2-23

To

The Controller of Examinations,
University of Pune
Ganeshkhind, Pune-411 007.

Sir

I Sanjay D. Patil the undersigned, Jr. Supervisor appointed on the above-mentioned Block at the 03 examination held at Govt. College of Engg. & Research, Awasari college (Centre), am hereby making report against Candidate No. 5190780056

Shri/Smt. Shelke Aditya Santosh at the examinations, as follows ;

Yours faithfully,

Sanjay D. Patil
(Jr. Supervisor)

Date: 1-2-23

Time:

Name & Address of the Junior Supervisor

Sanjay Devdas Patil
Govt. College of Engg. & Research, Awasari

On the basis of the report made by the Jr. Supervisor, I am of the opinion that there is a prima facie case of Unfair Means resorted to by the aforesaid Candidate No. 5190780056 and therefore the case be forwarded to the University for investigation.

S. V. Keshavnagar
INTERNAL SENIOR SUPERVISOR
Signature (Date: 01-02-2023)

Govt. College of Engineering and Research

Name: Awasari, Tal. Ambegaon, Dist. Pune

Date: 01-02-2023

Forwarded to the Controller of Examinations, University of Pune, Ganeshkhind, Pune-411 007.
for necessary action.

Seal of the College/Institution/University (Centre)

Place: GCBEARA, Awasari

Date: 01/02/2023

Encl: paper, copy sheet, hall ticket, question paper.



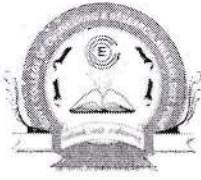
S. V. Keshavnagar
Signature of Chief Conductor

(N.B.: Kindly enclose a copy of the relevant question paper)

PROFORMA 'B'

Proforma for submission of the Information regarding prosecution of Candidates appeared at the Centre

Centre No.	Examination	Name and Seat No. of the Candidate prosecuted	Date of Prosecution	Report of which the candidate was found malpractising and nature of malpractice in brief	Name of the Person who detected the malpractice	Signature of Jr. Supervisor	Signature of Sr. Supervisor	Signature of Chief Conductor	Remarks
1	2	3	4	5	6	7	8	9	10
4078 Govt. College of Engg. & Research Ambegaon	End Sem Exam Dec. 22 Theory Exam.	Shelke Aditya Santosh 51907D 0056	1-2-23	malpractice using micro revox. External Senior Supervisor	SPPU SQUAD	<i>[Signature]</i> INTERNAL SENIOR SUPERVISOR EXAMINATION CELL (4078) Govt. College of Engineering and Research Ambegaon, Dist. Pune	<i>[Signature]</i> INTERNAL SENIOR SUPERVISOR EXAMINATION CELL (4078) Govt. College of Engineering and Research Ambegaon, Dist. Pune	<i>[Signature]</i> INTERNAL SENIOR SUPERVISOR EXAMINATION CELL (4078) Govt. College of Engineering and Research Ambegaon, Dist. Pune	Student found using micro revox using it
									PRINCIPAL Govt. College of Engineering and Research Ambegaon, Dist. Pune



Government of Maharashtra

Government College of Engineering & Research, Avasari-Khurd,

Taluka - Ambegaon, Dist. - Pune - 412405

Telephone No. : 02133-230582

website : www.gcoeara.ac.in

Email ID : office.gcoeavasari@dtmaharashtra.gov.in

(Automobile & Mechanical Engineering Programmes Accredited by NBA, New Delhi)

No. GCOEARA/2024/ 2387

Date -

To,
The Director,
Board of Examinations,
Savitribai Phule Pune University,
Pune.

17 AUG 2024

Sub : Application regarding discrepancies in the answer book.
Ref : Circular No.188/2023,Ref no. Nk-iz-o iq-@ 299 Date:22/08/2023.

Sir,

With reference to the circular cited as above, I got a scanned copy of the Answer book of following course/paper and gone through it carefully. The details of the same have been given as under. I found some discrepancies in the Answer book. Therefore, I am submitting herewith an application for discrepancies in the answer book as per the provisions of amended Ordinance 184(A) & (B) as regards supply of photocopies of assessed answer books to the students and revaluation of answer books of theory papers.

The details of the student with paper(s) are as under:

1. Name of the student : MAGAR AJINKYARAJ DADASAHEB
1. ApplicationID: : 12404043236
2. Course Name : FE2019
3. Year : March/April, 2024 | Oct/Nov, 2024
4. Paper name with code no : BASIC ELECTRICAL ENGG.
5. Nature of discrepancies: (As per above circular 3(5):

Sr.No.	Nature of discrepancies	Yes/No	Details thereof
1.	Whether the marks mentioned in the statement of marks of the examinee for any particular theory paper do not match with the marks awarded to the examinee on the cover page of the assessed answer book.	No	Marks on statement..... Marks Awarded on cover page of Answer book..
2.	Whether the question marks awarded to the examinee in the answer book are not carried over correctly to the cover page of the answer book.	No	Mention missed question nos, if any
3.	Whether the total of the question marks mentioned on the cover page is not correct?	No	Correct Total: Wrong total:
4.	Whether any answer or part thereof, in the answer book has not been assessed by the examiner?	NO	Q. Nos. Page nos...
5.	Whether there is any other discrepancy with regard to totaling of marks awarded to the examinee in the answer book?	Yes	

The discrepancies have been scrutinized and found truth in the application of the student. Therefore, the same is being forwarded for further necessary action in the matter as per the procedure prescribed in the above referred circular.

Yours



Principal
Govt. College of Engineering
and Research Awasari,
Tal. Ambegaon, Dist. Pune

17/8/24

To be printed on the covering letter of the college concerned
 Ref : Circular No.188/2023, Ref no. Nk-iz-o iq- @299 Date: 22/08/2023.

To,
 The Director,
 Board of Examinations,
 Savitribai Phule Pune University,
 Pune.

Sub : Application regarding discrepancies in the answer book.
 Ref : Circular No.188/2023, Ref no. Nk-iz-o iq- @299 Date: 22/08/2023.

Sir,

With reference to the circular cited as above, the student made an application for discrepancies in the answer book as per the provisions of amended Ordinance 184(A) & (B) as regards supply of photocopies of assessed answer books to the students and revaluation of answer books of theory papers.

The details of the student with paper(s) are as under:

1. Name of the student : Magar Ajinkya Dadasaheb
2. Course Name : FE 2019
3. Year : March/April, 2024 | Oct/Nov. 2024
4. Paper name with code no : Basic Electrical Engineering
5. Nature of discrepancies :
 (As per above circular 3(5))

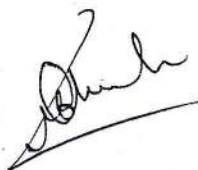
Sr. No	Nature of discrepancies	Yes / No	Details thereof
(i)	Whether the marks obtained by the examinee for any particular theory paper do not match with the marks awarded to the examinee on the cover page of the assessed answer book.	Yes / No ✓	Marks on statement : ... Marks Awarded on cover page of Answer book :
(ii)	Whether the question marks awarded to the examinee in the answer book are not carried over correctly to the cover page of the answer book.	Yes / No ✓	Mention missed question nos, if any
(iii)	Whether the total of the question marks mentioned on the cover page is not correct?	Yes / No ✓	Correct Total : 5(C), 2(CA), 2(Cb), 2(Cc) 4 Wrong total : ...
(iv)	Whether any answer or part thereof, in the answer book has not been assessed by the examiner?	Yes / No ✓	Q. Nos. ... 5(C), 2(CA), 2(Cb), 2(Cc), Page nos. 4, 10, 17, 19, 21, 22. 4
(v)	Whether there is any other discrepancy with regard to totaling of marks awarded to the examinee in the answer book?	Yes / No ✓	Discrepancy in total marks rewarded.

The discrepancies have been scrutinized and found truth in the application of the student. Therefore, the same is being forwarded for further necessary action in the matter as per the procedure prescribed in the above referred circular.

Yours

Encl : Application of student along with the scanned Answer book.

Principal



R/S, Remark for (V)
Q-5c, Q-2a, b, c,
Q-4a, b need to
recheck for marks
improvement

Plus
17/8/24

Application to be submitted by student to college concerned.

Ref: Circular No.188/2023,Ref no. [REDACTED]-@ 299 Date:22/08/2023.

To,
The Principal,
Govt. College Of Engg. & Research

Sub : Application regarding discrepancies in the answer book.
Ref : Circular No.188/2023,Ref no. [REDACTED]-@ 299 Date:22/08/2023.

Sir,

With reference to the circular cited as above, I got a scanned copy of the Answer book of following course/paper and gone through it carefully. The details of the same have been given as under. I found some discrepancies in the Answer book. Therefore, I am submitting herewith an application for discrepancies in the answer book as per the provisions of amended Ordinance 184(A) & (B) as regards supply of photocopies of assessed answer books to the students and revaluation of answer books of theory papers.

The details of the student with paper(s) are as under:

1. Name of the student : MAGAR AJINKYARAJ DADASAHEB
2. ApplicationID: : 12404043236
3. Seat No : F190780350
4. Course Name : FE2019
5. Year : March/April, 2024 | Oct/Nov. 2024
6. Paper name with code no : BASIC ELECTRICAL ENGG.
7. Nature of discrepancies: (As per above circular 3(5) :

Sr.No.	Nature of discrepancies	Yes/No	Details thereof
1.	Whether the marks mentioned in the statement of marks of the examinee for any particular theory paper do not match with the marks awarded to the examinee on the cover page of the assessed answer book.	No	Marks on statement Marks Awarded on cover page of Answer book.:
2.	Whether the question marks awarded to the examinee in the answer book are not carried over correctly to the cover page of the answer book.	No	Mention missed question nos, if any
3.	Whether the total of the question marks mentioned on the cover page is not correct?	No	Correct Total: Wrong total:
4. <input checked="" type="checkbox"/>	Whether any answer or part thereof, in the answer book has not been assessed by the examiner?	Yes	Q. Nos. 5(c),2(a),2(b),2(c),4(a),4(b) Page nos... 4,16,17,19,21,22
5. <input checked="" type="checkbox"/>	Whether there is any other discrepancy with regard to totaling of marks awarded to the examinee in the answer book?	Yes	Discrepancy in total marks rewarded

Therefore, you are requested to scrutinize and verify the truth in the discrepancies and forward the same to the university within five days i.e. the time limit as prescribed by university.

Yours

Ajinkya
Name & Sign of the Student

Encl: Scanned copy of the Answer book.

- Ajinkya* Dadasaheb Magar
- 1) Please recheck Q. NO. 5C, if possible give marks for steps.
 - 2) Please increase 01 marks for Q.5 b if possible.
 - 3) Please recheck Q. 8 c if possible. 08 marks question assigned
 - 4) Please recheck Q. 2b if possible and 2c if possible.

[Signature]
17/8/2024
M. R. A. H. S. H.

SAVITRIBAI PHULE PUNE UNIVERSITY

Application Form No.

17 Aug 2024



22404017532

FORM OF REVALUATION OF ANSWER BOOKS

- 1. The Application form shall be printed and preserved with candidate only.
- 2. Don't send hard copy of the Application form to Savitribai Phule Pune University / College.

To,
**THE DIRECTOR,
BOARD OF EXAMINATION &
EVALUATION,
SAVITRIBAI PHULE PUNE UNIVERSITY,
GANESHKHIND, PUNE 411007.**

Sir,
I, the undersigned, request you to verify and issue xerox copy of my answer book(s) as per details given below:

Candidate Name	MAGAR AJINKYARAJ DADASAHEB
College	Govt. College Of Engg. & Research
Exam Month & Year	202404
No. of Subjects appeared:	1
Centre at which appeared	78
Seat No.	F190780350
PRN No.	72255290E

(Subjects for Verification of Marks & Revaluation of Answer Book(s) [Theory Subjects only])

Subject Code	Subject Name	Marks Obt.	Photocopy
103004	BASIC ELECTRICAL ENGG.	19	Revaluation
Processing Fees			0.00
Subject Fees			250.00
Total Fees			250.00

DECLARATION OF THE CANDIDATE

Date:.....

Yours faithfully,

.....
(Signature of the Candidate)

I here by declare that,

1. I have gone through the rules of Revaluation & Instructions mentioned below and it shall be binding on me.

2. I am aware about rule regarding change of marks in revaluation (i.e. increase of atleast 5% marks are essential to declare change).

3. The result of the Revaluation shall be binding on me and I shall accept the revised marks after Verification of Marks and Revaluation of answer book(s).

4. I have not submitted any other form of Revaluation for said examination.

5. I have read the Circular No.232 of 1981-82 regarding Provisional Admission and it shall be binding on me.

Savitribai Phule Pune University



HallTicket For F.E.(2019 PAT.) MAR/APR 2024

SeatNo	PRN	CentreCode	CollegeCode	PUN Code
F190780350	72255290E	78	78	CEGP014980

Name : MAGAR AJINKYARAJ DADASAHEB

Mother : ROHINI

College: GOVT.COLLEGE OF ENGINEERING,AWASARI,
KHURD,AMBEGAO



Sub Code	Subject Name	Type	Exam Date	Exam Time
103004	Basic Electrical Engineering	[TH]		

NOTE:

Students should ensure that details like Name,Photo, PRN, Subjects printed on Hall Ticket are correct. In case of any discrepancy, please immediately contact to College Exam Officer (CEO).

In Case, College does not have Exam Center, please follow University Circular.

In Case of any discrepancy between hallticket & time table published on university website (<http://exam.unipune.ac.in>), the timetable on website to be followed.

Signature of Student

College Principal / Director

GOVT. COLLEGE OF ENGINEERING, AWASARI,
KHURD, AMBEGAO

Application to be submitted by student to college concerned.
Ref: Circular No.188/2023, Ref no: Nk-lz-o iq- @299 Date: 22/08/2023

Date :

To:
The Principal.

Sub: Application regarding discrepancies in the answer book.
Ref: Circular No.188/2023, Ref no: Nk-lz-o iq- @299 Date: 22/08/2023.

Sir,

With reference to the circular cited as above, I got a scanned copy of the Answer book of following course/paper and gone through it carefully. The details of the same have been given as under. I found some discrepancies in the Answer book. Therefore, I am submitting herewith an application for discrepancies in the answer book as per the provisions of amended Ordinance 184(A) & (B) as regards supply of photocopies of assessed answer books to the students and revaluation of answer books of theory papers.

The details of the student with papers) are as under:

1. Name of the student : **Magar Ajinkya Dadasaheb**
2. Course Name : **FE 2019**
3. Year : **March/April, 2024 / Oct/Nov, 2024**
4. Paper name with code no : **Basic Electrical Engineering (103004)**
5. Nature of discrepancies :
(As per above circular 3(5))

Sr. No	Nature of discrepancies	Yes / No	Details thereof
(i)	Whether the marks mentioned in the statement of marks of the examinee for any particular theory paper do not match with the marks awarded to the examinee on the cover page of the assessed answer book.	Yes / No	Marks on statement : ... Marks Awarded on cover page of Answer book : ...
(ii)	Whether the question marks awarded to the examinee in the answer book are not carried over correctly to the cover page of the answer book.	Yes / No	Mention missed question nos, if any
(iii)	Whether the total of the question marks mentioned on the cover page is not correct?	Yes / No	Correct Total : .. Wrong total : ...
(iv)	Whether any answer or part thereof in the answer book has not been assessed by the examiner?	Yes / No	Q. Nos. ... Page nos. ...
(v)	Whether there is any other discrepancy with regard to totaling of marks awarded to the examinee in the answer book?	Yes / No	

Therefore, you are requested to scrutinize and verify the truth in the discrepancies and forward the same to the university within **five days** i.e. the time limit as prescribed by university.

Encl : Scanned copy of the Answer Book.

Yours

Name & Sign of the student

Ajinkya Dadasaheb Magar



AA

SAVITRIBAI PHULE PUNE UNIVERSITY

Seat No F190780350
 Stk. No 2732546
 Sub. BELECRTIE
 Centre 4078

103004-BELECRTIE



Sem:1 70119

Examination	End sem Exam 20		
Day & Date	Wednesday 22/5/24		
Subject	Basic Electrical Engineering		
Roll No.	62-60-5	Sec	
Medium Answer	ENGLISH		
Seat No. : In figure & In words	190780350		
	One nine zero seven eight zero three five zero		
Signature of Candidate	[Signature]		

Instruction to Candidate

- Candidate has to confirm seat number, subject and centre number printed on Bar code and write it on attendance sheet.
 चिदाथ्यानि प्रथम बार कोडवरील आसन क्रमांक, विषय व केंद्र क्रमांक तपासून योग्य असल्याची खात्री करावी आणि उपस्थिती पत्रकावर नोंदवावी.
- Paste Bar Code in prescribed space.
 उतारपत्रिकेवरील विहित जागेतच बार कोड लावावा.
- Do not write anything on Bar code sticker, otherwise it will be treated as unfair means.
 बार कोड स्टिकरवर काहीही लिहू नये, अन्यथा परीक्षा विषयकार समजला जाईल.

Q. No.	Examiner	Moderator
1	[Signature]	
2	06	
3	[Signature]	
4	08	
5	09	
6	[Signature]	
7	[Signature]	
8	6	
9	[Signature]	
10	[Signature]	
11	[Signature]	
12	[Signature]	
Total in Figure	19	
Total in Words	Nineteen	
Signature	[Signature]	

Specific remarks regarding malpractice (in Red Ink)

Total	Marks in Figure	Marks in Words	Sign
Examiner	19	Nineteen	[Signature]
Moderator			

१. विद्यार्थ्यांनी उत्तरपत्रिकेच्या मुखपृष्ठावर तसेच उपस्थिती पत्रकावर विहित जागेत आसन क्रमांक अंकात व अक्षरात बिनबळक लिहून स्वाक्षरी करावी.
२. उत्तरपत्रिकेवर फक्त निळ्या अथवा काळ्या शाईचा उपयोग करावा, अन्यथा उत्तरपत्रिकेचे मूल्यमापन केले जाणार नाही.
३. उत्तरपत्रिकेच्या पृष्ठक्रमांक ३ पासून लिहिण्यास प्रारंभ करावा.
४. संबंधित प्रश्नाचे अथवा उपप्रश्नाचे उत्तर जेथून सुरु होते तेथेच समासात प्रश्न क्रमांक, उपप्रश्न क्रमांक अचूक व स्पष्ट लिहावा, यासाठी वेगळ्या शाईचा उपयोग करू नये.
५. प्रत्येक पानाच्या दोन्ही बाजूस लिहावे, उत्तरपत्रिका किंवा पुरवणी उत्तरपत्रिकेचे कोणतेही पान फाडू नये, फाडल्यास परीक्षा गेष्टकार समजून पुढील कार्यवाही करण्यात येईल.
६. पेपर संपण्यापूर्वी १० मिनिटे अगोदर इशारा घंटा होईल, त्यानंतर विद्यार्थ्यांनी उत्तरपत्रिका व पुरवणी उत्तरपत्रिकेवर होलोग्राफ्ट स्टिकर विहित जागेवरच लावावा.
७. कॉपी करणे किंवा दुसऱ्याच्या नावावर परीक्षेस बसणे यांसारख्या कृती 'महाराष्ट्र-प्रीव्हेन्शन ऑफ मालप्रॅक्टिस अँडट युनिव्हर्सिटी, बोर्ड अँड अदर स्पेसिफाइड एक्झामिनेशन्स अँक्ट, १९८२' (सा.फु.पु.वि. चा अध्यादेश क्रमांक ९) त्वानुसार संमत केलेला कायदा या अन्वये दंडही असेल.

Candidate shall fill all information about seat number, paper etc. in prescribed space and sign on the answer book and attendance sheet.

Candidate shall use blue or black ink only. Otherwise answer book will not be evaluated.

Candidate shall start writing answer from page no. 3 of the answer book.

Candidate shall mention question number, sub question number correctly at the beginning of the same and shall not use ink other than blue or black.

Candidate shall write on both sides of pages and shall not tear off any page, it will be treated as unfair means.

Warning bell will be given before 10 minutes of the concluding time. Candidate shall paste Holograft Sticker at appropriate space on the answer book.

An Act of Copying or Impersonations at an Examination is Punishable under 'The Maharashtra Prevention of Malpractices at University, Board and Other Specified Examinations Act, 1982' (Ordinance 9 of SPPU). The Act passed to the effect.

Examiner and Moderator has to write marks on all given appropriate place only. Examiner should give assessment tick(✓) or (×) in the margin.

Q.No.	Examiner	Moderator	Verification	Revaluation
1	—			
2	००			
3	—			
4	००			
5	०९			
6	—			
7	१			
8	१०			
9	१			
10	१			
11	१			
12	१			
Total	१९			



Savitribai Phule Pune University

	Q.No.						TOTAL
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M							



3

Sl. No. / Q.No.

Blank lined area for writing answers.

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Q.No.						TOTAL
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S. No./Q.No.

Q5.

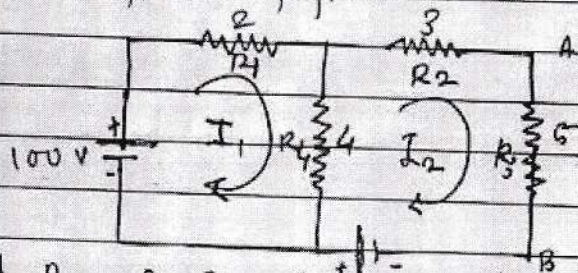
c)

→ Kirchoff's voltage law :-

This kirchoff's voltage law state that the voltage across the whole circuit is equal to the sum
i.e. $\sum V = 0$.

In mathamatically we say that the sum of all voltage across the circuit is equal to the zero.

Now from fig.



Let R_1, R_2, R_3, R_4 be the four resistances from the fig.

$$V = IR$$

$$\text{Now } \sum V = 0$$

$$-2I_1R - 3I_2R - 5I_2R - 4I_1R = 0$$

$$-4I_1R = 0$$

$$2I_1R + 3I_2R + 5I_2R + 4I_1R = 0$$

$$2I_1 + 3I_2 + 5I_2 + 4(I_1 - I_2) = 0$$

$$2I_1 + 8I_2 + 4I_1 - 4I_2 = 0$$

$$6I_1 - 4I_2 = 0$$

Q.No.						TOTAL
E						
M						



Q. No.

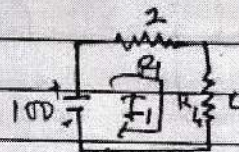
$$3I_1 - 2I_2 = 0$$

This is eqⁿ for given fig. by kirchoff's voltage law.

Given:-

$$R_1 = 2 \Omega, R_2 = 3 \Omega, R_3 = 5 \Omega, R_4 = 4 \Omega$$

Consider loop for I_1



by using voltage law,

$$V = IR$$

$$100 = -2I_1 - 4(I_2 - I_1)$$

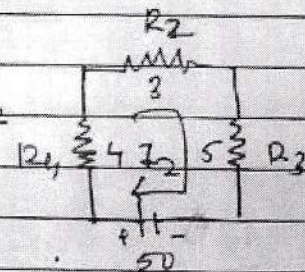
$$100 = -2I_1 - 4I_2 + 4I_1$$

$$100 = 2I_1 - 4I_2$$

$$50 = I_1 - 2I_2$$

$$I_1 - 2I_2 = 50 \quad \text{--- (1)}$$

similarly consider now loop for I_2



$$V = IR$$

$$50 = 3I_2 - 5R_2 - 4[I_2 - I_1]$$

$$50 = -3I_2 - 5I_2 - 4I_1 + 4I_2$$

$$50 = -8I_2 - 4I_1 + 4I_2$$

$$50 = -4I_2 - 4I_1$$

$$25 = -2I_2 - 2I_1$$

$$I_1 + I_2 = -25 \quad \text{--- (2)}$$



Q.No.						TOTAL
E	5	0				
M						



Q. No.

Now solve eqⁿ ① & ② simultaneously.

$$I_1 - 2I_2 = 50 \quad \text{--- (1)}$$

$$I_1 + I_2 = -25 \quad \text{--- (2)}$$

$$I_1 = 50 + 2I_2 \quad \text{--- put in eqⁿ (2)}$$

$$I_1 + I_2 = -25$$

$$50 + 2I_2 + I_2 = -25$$

$$3I_2 = -75$$

$$I_2 = \frac{-75}{3}$$

$$I_2 = -25$$

put I_2 in eqⁿ ③

$$I_1 = 50 + 2I_2$$

$$I_1 = 50 + 2(-25)$$

$$I_1 = 50 + (-50)$$

$$I_1 = 0$$

The current through branch AB is flowing is 25 Amp.

$$V = IR$$

$$100 = I \cdot 2$$

$$I = \frac{100}{2}$$

$$I = 50 \text{ A}$$

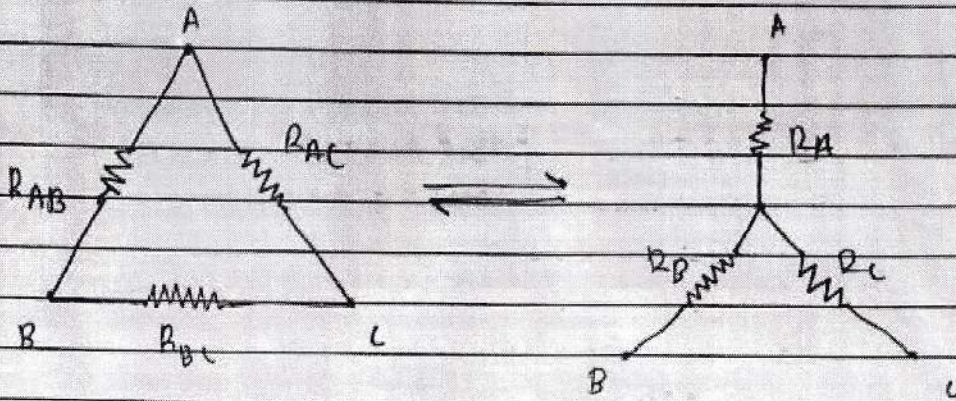
$$I = 50$$



Q. No.

Q5

b) \rightarrow



Consider resistance betⁿ node A & B

\therefore

$R_A + R_B = R_{AC}$ in parallel with $(R_{AB} + R_{BC})$

$$\therefore R_A + R_B = \frac{R_{AB} (R_{BC} + R_{AC})}{R_{AB} + R_{BC} + R_{CA}} \quad \text{--- (1)}$$

$$R_B + R_C = \frac{R_{BC} (R_{AC} + R_{AB})}{R_{AB} + R_{BC} + R_{CA}} \quad \text{--- (2)}$$

$$R_C + R_A = \frac{R_{AC} (R_{BC} + R_{AB})}{R_{AB} + R_{BC} + R_{CA}} \quad \text{--- (3)}$$

Adding eqⁿ (1), (2), (3)

$$2(R_A + R_B + R_C) = \frac{R_{AB} \cdot R_{BC} \cdot R_{CA} [R_{AB} + R_{BC} + R_{CA}]}{(R_{AB} + R_{BC} + R_{CA})^2}$$



Q.No.						TOTAL
E						
M						



प्र. क्र./Q.No.

$$R_A + R_B + R_C = \frac{R_{AB} \cdot R_{BC} \cdot R_{CA}}{R_{AB} + R_{BC} + R_{CA}} \quad (4)$$

Now sub tract eq^s ①, ②, ③ from eq (4)

$$R_A + R_B + R_C = \frac{R_{AB} \cdot R_{BC} \cdot R_{CA}}{R_{AB} + R_{BC} + R_{CA}} \quad (4)$$

$$R_A = \frac{R_{BA} \cdot R_{AC}}{R_{AB} + R_{BC} + R_{CA}}$$

$$R_B = \frac{R_{BC} \cdot R_{BA}}{R_{AB} + R_{BC} + R_{CA}}$$

$$R_C = \frac{R_{CA} \cdot R_{AC}}{R_{AB} + R_{BC} + R_{CA}}$$

this are the required eq^s or value of R_A, R_B, R_C

$$R_A = \frac{R_{BA} \cdot R_{AC}}{R_{AB} + R_{BC} + R_{CA}} \quad (i)$$

$$R_B = \frac{R_{BC} \cdot R_{BA}}{R_{AB} + R_{BC} + R_{CA}} \quad (ii)$$

	Q.No.					TOTAL
E						
M						



5. /Q.No.

$$R_c = \frac{R_{AC} \cdot R_{BC}}{R_{AB} + R_{BC} + R_{CA}} \quad \text{--- (iii)}$$

Q5]

a]



⊙ Partical voltage source supplies a load resistance R_L is given.

⊙ To draw i -circuit representation and V_L - I_L characteristics of this arrangement.

⊙ Partical voltage :-

In this voltage source is having their internal resistance series with them is called as the partical voltage circuit unit.

• It is denoted by R_{se}
 ⊙ expression for partical voltage :-

The due to resistance, voltage hold in circuit is

$$V_L = - (R_{se}) I_L + V_{oc}$$

$$V_L = V_s - I_L R_{se}$$



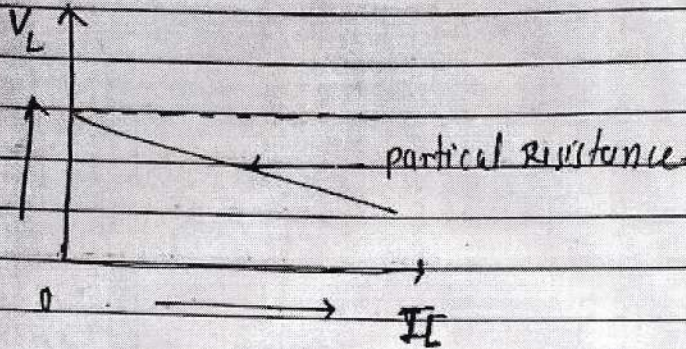
Q.No.					TOTAL
E	59				
M	24				



Q. No./Q.No.

$$V_L = V_S - I_L R_{oc}$$

graph for Partical Resistance



this graph shows the characteristics of partical resistance with respect to V_L & I_L voltage & current in circuit.

Q2

Q.No.						TOTAL
E		8	9			
M						

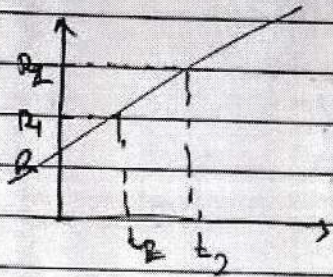


Pr. / Q.No.

Q.87

a) → Resistance temperature coefficient (RTC):-

It is defined as the resistance value change with the factor coefficient or shown in fig



The slope of the graph is

$$S = \frac{R_2 - R_1}{t_2 - t_1}$$

• The SI unit of Resistance temp. coefficient is per degree Celsius. [per °C].

• The SI unit of RTC is equal to 1°C.

0



Q.No.						TOTAL
E						
M						



Q. No.

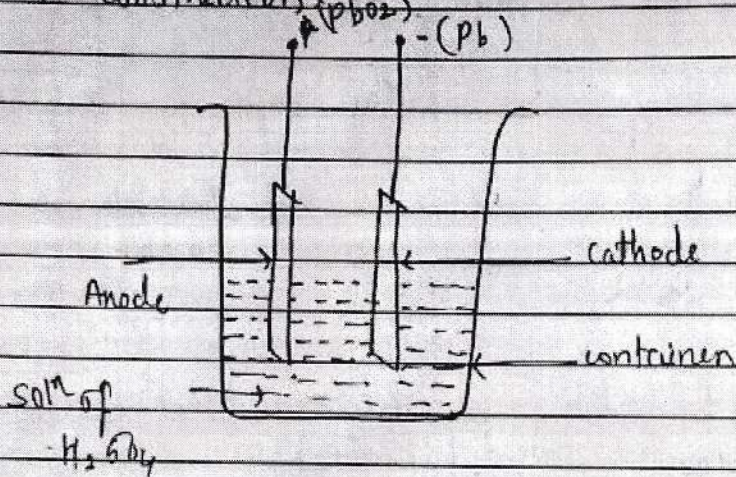
Q. 8]

Q



① lead - acid battery :-

a) construction :-



② Working :-

a) Positive terminal / anode :- the plate inserted in the solution of H_2SO_4 is made up of lead oxide (PbO_2) and having brown in colour.

b) Negative terminal / cathode :- this plate or electrode is made up of lead and having character of negative electrode to give the electrons or energy.

Q.No.	8					TOTAL
E						
M						



Sl./Q.No.

1) solⁿ of H_2SO_4 :- This is the sample solⁿ of H_2SO_4 , sulphuric acid with ~~the~~ liquid state plays an important role for the ~~production~~ process in lead-acid battery.

2) Container :- This all the process takes place in one plastic or glass container, in which cathode anode & aqueous solⁿ of H_2SO_4 is present.

3) Maintenance procedure :-

- In this types of battery we have to change the electrodes after some time or days.

- As this electrodes are having properties of gaining & losing the electrons after some days passes the plates start rusting or loosing its original state of properties.

- This we have to change time to time.

4) Applications :-

- Used for emergency current supply.

- In Automobile sector.

- In Industries for machine works.

- In Railway signaling.

- In power stations.



Q.No.						TOTAL
E						
M						

S. R./Q.No.

08

b)

→ Given:-

$$h = 15 \text{ m}$$

$$\text{water} = 72 \text{ m}^3$$

$$\text{time} = 60 \text{ min}$$

$$\text{efficiency} = 70\% = \frac{70}{100} = 0.70$$

$$\text{Input power} = \frac{\text{Output}}{\text{Efficiency}}$$

$$= \frac{2943}{0.70}$$

$$= 4204.2857 \text{ W}$$

$$\text{Power output} = Mgh$$

$$= 72000 \times 9.81 \times 15$$

$$= 10594800 \text{ J}$$

$$\text{Power output} = \frac{\text{Power}}{\text{Time}} = \frac{10594800}{3600} =$$

$$= 2943 \text{ W}$$

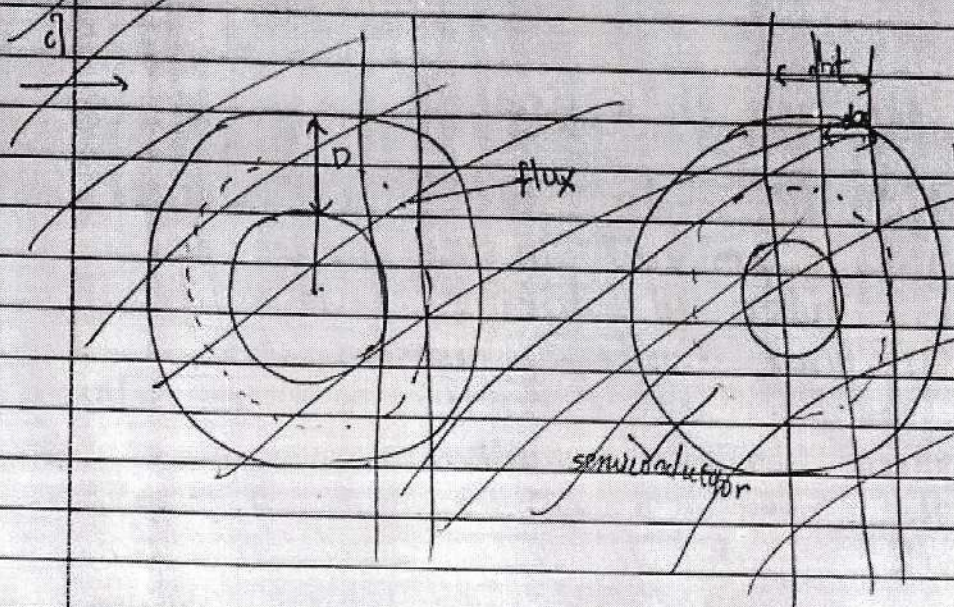
$$\text{Power input} = \frac{\text{Power}}{n} = \frac{2943}{0.70} \times 1000$$

$$= 4204.2857 \text{ W}$$

Q.No.	8/8				TOTAL
E					
M					100



Q.No.
8/8



$$P_{avg} = 444\pi \text{ W}$$

1080
42

Now daily cost of energy at Rs 10 per unit.

$$= 4204.2857 \times 10 \times 4$$

$$= \underline{\underline{168171.4286 \text{ unit}}}$$

∴ The daily cost of energy at Rs 10 per unit is 168171.4286 unit

04



Q.No.						TOTAL
E		2	1			
M			00			

Q. No. / Q.No.

Q2

Q2

→ Admittance of a circuit :-

The term Admittance state that the value or energy produced in the circuit or the ratio of different factors like Resistance, Voltage, current, etc.

- It changes with respect to the factors present in the circuit
- It forms a different type of triangles with respect to the material or factors
- like, capacitive circuit has different triangle, inductive circuit has different triangle, also impedance has their different triangles.

Q.No.								TOTAL
E								
M								

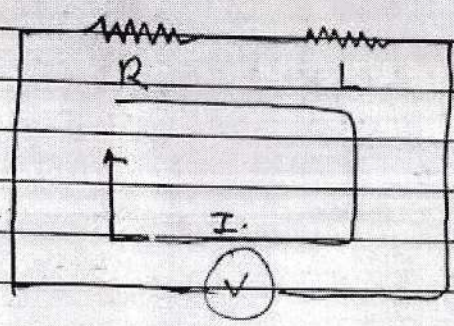


Q.No.

Q21

h)

① Expressions for instantaneous power and average power in a series R-L circuit excited by a purely sinusoidal voltage



$$v = v_m \sin \omega t$$

• In circuit Resistance & Inductance is connected in series with each other and also having voltage $v = v_m \sin \omega t$.

• The current lags voltage by angle ϕ in the given circuit

• When current flow through the ^{Resistance} circuit the voltage drop is given below.

$$V_R = I R$$

• When current flow through inductance then the voltage drop is equal to



Q.No.						TOTAL
E		2	1			
M						



S. B./Q.No.

$$V_L = I \times X_L$$

Total voltage applied is equal to

$$\vec{V} = \vec{V}_R + \vec{V}_L$$

$$\vec{V} = (I \times \vec{R}) + (I \times \vec{X}_L)$$

$$\vec{V} = I (R + jX_L)$$

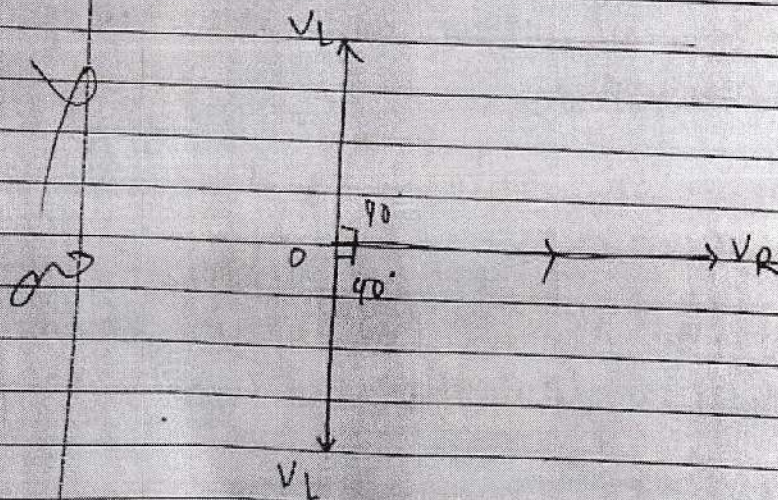
$$\vec{V} = I Z$$

$$|V| = I |Z|$$

where

$$(Z = jX_L)$$

o Phasor diagram



Q.No.						TOTAL
E						
M						

F./Q.No.
 Q2

→ Given

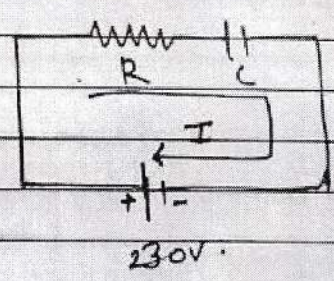
$R = 100 \Omega$
 Power Factor = 0.75
 $V = 230 \text{ V}$
 $f = 50 \text{ Hz}$

$$X_L = 2\pi fL$$

$$X_C = \frac{1}{2\pi fC}$$

Active power = $\sqrt{3}VI \cos \phi$

Reactive power = $\sqrt{3}VI \sin \phi$



$$I = \frac{V}{Z}$$

$$= \frac{230}{100} < 0$$

$$100 < 0.42$$

$R = 100 \Omega$
 $V = 230 \text{ V}$
 $f = 50 \text{ Hz}$

$$I = 2.3 \angle -0.42$$



Q.No.	2					TOTAL
E						
M						



Q. No./Q.No.

$$R = I \cdot V$$

$$= 2.3 \times 230$$

$$\boxed{R = 529 \Omega}$$

Capacitance

$$X_c = \frac{1}{2\pi fC}$$

$$= \frac{1}{2\pi \times 50 \times 0.75}$$

$$\boxed{X_c = 4.24 \times 10^{-3} \Omega}$$

$$Z = R + jX_c$$

$$= 100 + j(0.75)$$

$$\boxed{Z = (100 \angle 0.42^\circ \Omega)}$$

X
do



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	Q.No.					TOTAL
E		49				
M		30				



21

E./Q.No.

A4

a)

→ Advantages of an Auto transformer:-

• An auto transformer generates the electrical energy and also convert it into the our requirement. It plays more than one role in it.

• They are easy to operate.

• They are very useful in big sectors.

• They are easy & better for electricity transformations.

• The losses are less in order to other transformers.

• We doesn't have to change the functions of transformer. They will change automatically as per required supply.

30



Q.No.						TOTAL
E						
M						

Q. No./Q.No.

04

6

→ Given:-

A direct loading test is performed on a 1 kVA, 230 V/230 V, 50 Hz single phase transformer.

to find:-

The rated of primary & secondary w

To Draw:- Connection diagram showing all necessary measuring instruments with the appropriate ranges.

20

~~XXXX~~

Respected sir/ma'am I need only 30 m in this paper. plz give me 30 marker so I can go in 2nd year in college. plz it's very important to me as to pass in this sub. plz give me only 30 marker for passing. plz sir/ma'am



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	Q.No.							TOTAL
E								
M								



PPU-23/38

23

S./Q.No.

[Empty box for S./Q.No.]

end

g. Lumber

the

30 mar

vler

c

pass

sky

me