

← → 1 of 1 unhandled error

Server Error

ReferenceError: Cannot access 'getFieldValue' before initialization

This error happened while generating the page. Any console logs will be displayed in the terminal window.

Source

pages/[snapshotId]/preview.tsx (295:24) @ generateApplicationId [↗](#)

```
293 |   const departmentShort = getShortDepartment(props.department)
294 |   const positionCode = getPositionCode(props.position);
> 295 |   const dateOfBirth = getFieldValue(`Date of Birth (Please upl
      |                               ^
296 |   const formattedDOB = DateID(dateOfBirth);
297 |   return `${departmentShort}${positionCode}${formattedDOB}`;
298 | };
```

Call Stack

PreviewPage

pages/[snapshotId]/preview.tsx (300:24) [↗](#)

Show collapsed frames

GFR 12 – A
[(See Rule 238 (1))]
UTILIZATION CERTIFICATE (UC) FOR THE YEAR
in respect of *NON-RECURRING*
as on to be submitted to SERB
Is the UC(Provisional/Audited)
(To be given separately for each financial year ending on 31st March)

1. Name of the grant receiving Organization :
2. Name of Principal Investigator(PI)
3. SERB Sanction order no. & date
4. Title of the Project.....
5. Name of the SERB Scheme : (CRG/NPDF/ECR.....etc.)
6. Whether recurring or non-recurring grants : **NON-RECURRING**
7. Grants position at the beginning of the Financial year

- (i) Carry forward from previous financial year : ..
- (ii) Others, If any :
- (iii) Total** :

8. Details of grants received, expenditure incurred and closing balances: (Actuals)

Unspent Balance of Grants received previous years [figure as at Sl. No. 7(iii)]	Interest Earned thereon	Interest deposited back to the SERB	Grants received during the year			Total Available funds (1+2-3+4)	Expenditure incurred	Closing Balances (5-6)
1	2	3	4			5	6	7
			Sanction No. (i)	Date (ii)	Amount (iii)			

Component wise utilization of grants:

Grants-in-aid- General	Grant-in-aid-creation for capital assets	Total

Details of grants position at the end of the year

- (i) Balance available at end of financial year : ...
- (ii) Unspent balance refunded to SERB (If any) : ...
- (iii) Balance (Carried forward to next financial year) if applicable : ...

GFR 12 – A
[(See Rule 238 (1))]
UTILIZATION CERTIFICATE (UC) FOR THE YEAR
in respect of *NON-RECURRING*
as on to be submitted to SERB
Is the UC(Provisional/Audited)
(To be given separately for each financial year ending on 31st March)

Certified that I have satisfied that the conditions on which grants were sanctioned have been duly fulfilled/are being fulfilled and that I have exercised following checks to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained as prescribed in the relevant Act/Rules/Standing instructions (mention the Act/Rules) and have been duly audited by designated auditors. The figures depicted above tally with the audited figures mentioned in financial statements/accounts.
- (ii) There exist internal controls for safeguarding public funds/assets, watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of relevant Act/Rules/standing instructions and scheme guidelines.
- (iv) The responsibilities among the key functionaries for execution of the scheme have been assigned in clear terms and are not general in nature.
- (v) The benefits were extended to the intended beneficiaries and only such areas/districts were covered where the scheme was intended to operate.
- (vi) The expenditure on various components of the scheme was in the proportions authorized as per the scheme guidelines and terms and conditions of the grants-in-aid.
- (vii) It has been ensured that the physical and financial performance under **(CRG/NPDF/ECR.....etc.)** (Name of the scheme has been according to the requirements, as prescribed in the guidelines issued by Govt. of India and the performance/targets achieved statement for the year to which the utilization of the fund resulted in outcomes given at Annexure – I duly enclosed.
- (viii) The utilization of the fund resulted in outcomes given at Annexure – II duly enclosed (to be formulated by the Ministry/Department concerned as per their requirements/specifications.)
- (ix) Details of various schemes executed by the agency through grants-in-aid received from the same Ministry or from other Ministries is enclosed at Annexure –II (to be formulated by the Ministry/Department concerned as per their requirements/specifications).

Date:

Place:

Signature of PI :	Signature with Seal :..... Name: Chief Finance Officer (Head of Finance)	Signature with Seal..... Name: Head of Organisation
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(Strike out inapplicable terms)

GFR 12 – A
[(See Rule 238 (1))]
UTILIZATION CERTIFICATE (UC) FOR THE YEAR
in respect of *RECURRING*
as on to be submitted to SERB
Is the UC(Provisional/Audited)
(To be given separately for each financial year ending on 31st March)

1. Name of the grant receiving Organization :
2. Name of Principal Investigator(PI)
3. SERB Sanction order no. & date
4. Title of the Project.....
5. Name of the SERB Scheme : (CRG/NPDF/ECR.....etc.)
6. Whether recurring or non-recurring grants : **RECURRING**
7. Grants position at the beginning of the Financial year

- (i) Carry forward from previous financial year : ..
- (ii) Others, If any :
- (iii) Total** :

8. Details of grants received, expenditure incurred and closing balances: (Actuals)

Unspent Balance of Grants received previous years [figure as at Sl. No. 7(iii)]	Interest Earned thereon	Interest deposited back to the SERB	Grants received during the year			Total Available funds (1+2-3+4)	Expenditure incurred	Closing Balances (5-6)
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Place:

Signature of PI :	Signature with Seal :..... Name: Chief Finance Officer (Head of Finance)	Signature with Seal..... Name: Head of Organisation
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Date:

Place:

Signature of PI :	Signature with Seal :..... Name: Chief Finance Officer (Head of Finance)	Signature with Seal..... Name: Head of Organisation
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(Strike out inapplicable terms)

27-04-2024	End Sem Exam	Evening	2PM-5PM		
Room	Invigilator 1	Invigilator 2	Invigilator 3	Invigilator 4	Invigilator 5
R101	Dr. Abhinoy Kr. Singh	Akanksha Gupta (2021EE35)			
R102	Dr Papia Raj	MRINALINI TIWARI (1921CS02)	Anmol Kumar (2221CS17)	Priyesh Saini (2221EE11)	
R103	Dr. Rahul Kumar Singh	Ankur Jain (2221CS19)			
R104	Dr. Shovan Bhounick	Akanksha Dwivedi (2221EE02)	Gopal Krishna (1921EE16)	Faraz Haider (2121EE29)	
R105	Dr Mohd Kaleem Khan	Anoop Kumar Shukla (2021ME20)			
R107	Dr Ramkrishna Bag	Debojyoti Paul (2121CE11))	Rajen Kumar (2021MA04)	Priya Singh (1921EE17)	
R109	Prof. Karali Patra	Vishal Tiwari (ME)	Vineeta Singh (2121CB09)	Sana Perween (2121CB11)	
R301	Dr. Utpal Roy	Kumar Amit (2021ME21)			
R302	Dr Smriti Singh	TOWHIDUR RAHAMAN (2021PH32)			
R303	Dr Arvind K Jha	Sonu Kumar Kashyap (ME)	Rajesh Kumar (2121CB07)	Ahmad Rashiq (2021CE05)	
R308	Dr. Bharat Bhushan	Dr. Santosh Kumar (PH)	Kumari Priya (2321CS02)	Raghvendra Kumar (2221CS27)	
R408	Dr.Ranjeet Ranjan Jha	SAMAYUN SAIKH(2021PH35)	Mansi Baliyan(2121PH22)	Sunandini Swain (2121CB10)	
R502	Dr Avik Samanta	Lokesh Sharan Srivadtava (2121CE07)	Md Naquib Alam (2021CE24)	Mayank Sah (2221CS09)	Vivek Kumar (2021ME18)

28-04-2024	End Sem Exam	Evening	2PM-5PM		
Room	Invigilator 1	Invigilator 2	Invigilator 3	Invigilator 4	Invigilator 5
R101	Dr. Mahesh K H Kolekar	Shubham Anand (2021EE07)			
R102	Dr. Mayank Agarwal	Aizan Zafar (1921CS17)	Ishwar Chandra Mahto (2221CS30)	Asres Temam Abagissa (2121CS19)	
R104	Dr Udit Satija	Rohit Kumar Singh (1921EE19)	Priya Singh (1921EE17)	Divya Singh (1921CS21)	
R107	Dr. Anirban Mahto	Prayag Kumar (ME)	Akhilesh Kumar Tiwari (2121ME02)	JYOTI KUMARI (1921CS22)	
R109	Dr. Sujoy Kumar Samanta	Indrajeet Kumar (ME)	Tibebu Bekel Shana (2121CS21)	Muskan Kanwar(2321HS03)	
R301	Prof. Jimson Mathew	Adarsh Ravi (2021EE01)			
R302	Dr. Probir Saha	Harshdeep Sharma (2121ME06)			
R303	Dr Sudhir Varma	Rashi Srivastava (2121CB15)	Sana Perween (2121CB11)	Shailesh Kumar Yadav (2021CE26)	
R304	Dr. Taraknath Kobaku	Deepak Kumar (2121EE28)			
R308	Dr Koushik Roy	Atif Hussain (2121CE01)	Asha Shuhla (2121MA18)	Raushan Kumar (2221CB13)	
R408	Dr. Akash Singh	AISWARYA R(2121PH01)	SIBANISANKAR SAHOO(2121PH23)	RAHUL KUMAR(2121PH25)	
R502	Dr. Balendu Bhooshan Upadhyay	Abhijnan Pritam Sarma(2321HS01)	SANDEEP KUMAR (2121CS29)	Rupesh Pandey (2021MA20)	Subham Paul (2021MA25)

29-04-2024	End Sem Exam	Evening	2PM-5PM		
Room	Invigilator 1	Invigilator 2	Invigilator 3	Invigilator 4	Invigilator 5
R101	Dr Nalin Bharti	Dhiren Kumar Nayak (EE)			
R102	Dr. Abyayananda Maiti	Kumar Swapnil (EE)	Ratnesh Kumar Joshi (1921CS28)	Sujeet Kumar (2021EE08)	
R103	Dr Pradipta Chakraborty	Mr. Ved Prakash (JTS, MME)			
R104	Dr. Avneet Kumar	Varun Kumar (EE)	Shubham Anand (2021EE07)	APPICCHARLA RAMAKRISHNA (2021CS01)	
R105	Dr. Akhilendra Singh	Rakesh Kumar Singh (2121ME12)			
R106	Dr. Subhabrata Paul	Sk Aziz (2021MA22)			
R107	Dr. Surajit Kumar Paul	Pramod Prakash Dubey (ME)	Mohit Sharma (2121ME10)	Gitanjali Kumari (2021CS03)	
R108	Dr. S. K. Pandey	Murali B (EE)			
R109	Dr. Abhishek Raj	Ravikant Kumar (ME)	Rajnish Mishra (2121ME11)	Md Shahbaz Nazami (2021CS04)	
R110	Dr. S. Sivasubramani	ALLARAKHA SHIKDER (2121PH02)			
R301	Dr. Amit Kumar Verma (MA)	Anuj Kumar Umrao (2021MA07)			
R303	Dr. Akshar Tripathi	Priyam Mishra (2121CE10)	Karnati Ganesh Reddy (2221CB11)	Manish Meena (2221CB03)	
R308	Dr. Ajay D. Thakur	Chandan kumar Gupta (2221MA02)	Anindita Saha (2121CB02)	Abhinav Anand (2121CE15)	
R408	Dr. Sunil Kumar Singh	Ram Chandra Prajapati (ME)	Krishna Veer Singh Gurjar (2021ME08)	NEHA PRAMANICK (2121CS06)	
R502	Dr Meghna Dutta	Subodh Kumar Azad (CBE)	Sarmistha Das (2221CS21)	Piyush Kumar Garg (2021CS05)	Sana Perween (2121CB11)

30-04-2024	End Sem Exam	Evening	2PM-5PM		
Room	Invigilator 1	Invigilator 2	Invigilator 3	Invigilator 4	Invigilator 5
R101	Dr. Ranjeet Ranjan Jha	Ankit Kumar Kushwaha (2121CE16)			
R102	Dr. Raghavan K. Easwaran	Sonu Kumar Kashyap (ME)	Mazhar Hussain (2121ME25)	Arihant Patwari (2221MA09)	
R103	Dr. Rahul Kumar Singh	Ashish (2021EE12)			
R104	Dr. Atanu Kumar Metya	Nurul Hasan (CEE)	Md Yasir Shaikh (2221CE16)	Ankita Yadav (2321MA01)	
R105	Dr. Y. K. Singh	Shreya Das (2121EE15)			
R106	Dr Om Prakash (CE)	KHASHTI DATT PANDEY(2121PH05)			
R107	Dr Deepu P	Vishal Tiwari (ME)	Ajmit Kumar (2121ME22)	Anoop Kushwaha (2221MA11)	
R109	Dr Sourav Gur	Rahul Kumar (2221CE08)	Pradeep Kumar Sahu (2321MA03)	Md Alquma Haider (2021CB09)	
R110	Dr. S. K. Parida	Piyali Pal (2021EE24)			
R301	Prof. Manabendra Pathak	Avinash Upadhyay (2121ME24)			
R302	Dr. C.S Prajapati	Rajeshwar Yadav (2021CS06)			
R303	Dr. Shushmitha P.	Ramanand Singh (2221CE15)	Rupesh Pandey (2021MA20)	Sunandini Swain (2121CB10)	
R304	Dr. Sushant Kumar	ANIRBAN SAHA (2021CS13)			
R305	Dr. Udit Satija	Nilpa Kumari (2021EE22)			
R306	Dr. Anup Keshri	Manish Meena (2221CB03)			
R308	Dr. Sandeep Aashish	Rajesh Kumar (2121CB07)	Raushan Kumar (2221CB13)	Sk Aziz (2021MA22)	
R408	Dr. Sudhansu Shekhar Panda	Budhram Kisku (ME)	Surya Prakash Singh (2121ME18)	Sonu (2021MA23)	
R502	Dr Syed KK Hussaini	Subodh Kumar Azad (CBE)	Rakesh Raushan (2321CE06)	Prashant Kumar (2321CE04)	Subham Paul (2021MA25)

01-05-2024	End Sem Exam	Evening	2PM-5PM		
Room	Invigilator 1	Invigilator 2	Invigilator 3	Invigilator 4	Invigilator 5
R101	Dr. T. Rajagopala Rao	Amit Shanker Sant (CEE)			
R102	Dr Koushik Roy	SUSHREE NIBEDITA ROUT(2021PH31)	MEDHASREE GHOSH (2121CS05)	SRISHTI GUPTA (2021CS38)	
R104	Dr. Mayank Agarwal	KOMALBEN SHARADKUMAR PANDYA (2021CS17)	MD Shayan Sabri (2321CE12)	SUJIT CHOWDHURY (2021CS35)	
R107	Dr. Soumya Jyoti Ray	SAMBIT KUMAR BISWAL(2121PH09)	Shivani Gupta (2221CS18)	SURBHI RAJ (2021CS36)	
R109	Dr. Ranjan Kr. Behera	Dr. Rahul Mishra	Punyesh Kumar Jha (2121EE27)	Pabitra Kumar Tunga (1921MA02)	
R303	Dr. K. C. Ray	Shivani Singh (2021EE32)	MOBASSIR AHMAD(2121PH06)	SRIGANAPATHY RAGHAV RV(2121PH13)	
R502	Prof. Mayank Tiwari	Kadali Mani Shankar (2221ME03)	SHRUTI SAXENA (2021CS31)	SAURABH SHARMA (2021CS30)	Md shahbaz nazami (2021CS04)

02-05-2024	End Sem Exam	Evening	2PM-5PM		
Room	Invigilator 1	Invigilator 2	Invigilator 3	Invigilator 4	Invigilator 5
R101	Dr. Satendra Kumar	Subhashree (2121HS11)			
R102	Dr. Samrat Mondal	Bipasha (2221HS06)	Parvathy (2121HS19)	NASEEM BABU (2021CS22)	
R103	Dr. Murshid Imam	Zawed Alam (2221ME14)			
R104	Dr. Rishi Raj	Nadamala (2121HS21)	PRANAB SAHOO (2021CS25)	NARENDRA SINGH LODHI (2021CS21)	
R105	Dr. Sandan Sharma	Anushka (2221HS08)			
R107	Dr. Rishav Singh	Argha (2121HS23)	Arun (2221HS04)	SANDEEP KUMAR PATEL (2021CS28)	
R109	Dr Smriti Singh	Spandan (2221HS05)	PRIYANSHU PRIYA (2021CS26)	Subham Raj (2221CS25)	
R301	Dr Om Prakash (CE)	Bijoy (2121HS08)			
R302	Dr Priyanka Tripathi	Anwasha (2121HS18)	Lokesh Sharan Srivastava (2121CE07)		
R303	Dr Sweta Sinha	Sujata (2221HS14)	Sony (2221HS18)	Pramadhanatha Reddy Pocha (2121CE18)	
R304	Dr. Devinder Yadav	Tribarna (2221HS24)			
R305	Dr. Shushmitha P.	NELSON SHARMA (2121CS07)			
R306	Dr. Jobin Jose	Ahmad Rashid (2021CE05)			
R308	Dr Nalin Bharti	Ujjawal (2221HS12)	Labani (2221HS12)	NEHA PRAMANICK (2121CS06)	
R309	Dr Aditya Raj	Shivani Sain (2321MA04)			
R408	Dr Papia Raj	Amrita (2221HS16)	Panchali (2221HS17)	Preeti Puja(2321HS05)	
R502	Dr. Jagnath Malik	Gargi Dowarah(2321HS02)	Mohit (2221HS14)	Sohini (2221HS02)	Manu (2221HS20)

03-05-2024	End Sem Exam	Evening	2PM-5PM		
Room	Invigilator 1	Invigilator 2	Invigilator 3	Invigilator 4	Invigilator 5
R102	Dr. Sumanta Gupta	Vikash Kumar (2321EE07)	Priyadarshni (2221CS16)	NARENDRA SINGH LODHI (2021CS21)	
R104	Dr. Arijit Roy	SANDEEP KUMAR PATEL (2021CS28)	Dibyanayan Bandyopadhyay (2321CS14)	Kartik Kaushik (2221CS32)	
R107	Dr. Mahesh K H Kolekar	Dr. Rahul Mishra	Baban Gain (2321CS12)	Mohd Mufeed (2221EE25)	
R109	Dr. Y K Singh	Shreya Das (2121EE15)	Subrata Das (2221CS13)	Debasmita Manna (2121CS18)	
R301	Dr. Chandranath Adak	Utsav Kumar Nareti (2221CS28)			
R303	Dr. Ranjit Laha	ANKUSH KUMAR(2121PH18)	JYOTI BIKASH MOHAPATRA(2221PH 05)	Suresh Tiwari (2221CH08)	
R308	Dr. Dinesh Kumar Kotnees	TUPAN DAS(2121PH14)	ANAMIKA SHARMA(2221PH01)	Shridhar Kumar (2121MA11)	
R408	Dr. Naveen K. Nishchal	Krishna Jee (CBE)	PRIYANKA PRIYADARSHANI SAMAL(2121PH26)	Nurabul Mondal (2221CH06)	
R502	Dr. Arijit Mondal	SAURABH SHARMA (2021CS30)	Akash Ghosh (2321CS19)	Prince Kumar (2321CS21)	Debashis Das (2221CS31)

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R101	Dr. Abhinoy Kr. Singh	Akanksha Gupta (2021EE35)			
R102	Dr Papia Raj	MRINALINI TIWARI (1921CS02)	Anmol Kumar (2221CS17)	Priyesh Saini (2221EE11)	
R103	Dr. Rahul Kumar Singh	Ankur Jain (2221CS19)			
R104	Dr. Shovan Bhounick	Akanksha Dwivedi (2221EE02)	Gopal Krishna (1921EE16)	Faraz Haider (2121EE29)	
R105	Dr Mohd Kaleem Khan	Anoop Kumar Shukla (2021ME20)			
R107	Dr Ramkrishna Bag	Debojyoti Paul (2121CE11))	Rajen Kumar (2021MA04)	Priya Singh (1921EE17)	
R109	Prof. Karali Patra	Vishal Tiwari (ME)	Vineeta Singh (2121CB09)	Sana Perween (2121CB11)	
R301	Dr. Utpal Roy	Kumar Amit (2021ME21)			
R302	Dr Smriti Singh	TOWHIDUR RAHAMAN (2021PH32)			
R303	Dr Arvind K Jha	Sonu Kumar Kashyap (ME)	Rajesh Kumar (2121CB07)	Ahmad Rashiq (2021CE05)	
R308	Dr. Bharat Bhushan	Dr. Santosh Kumar (PH)	Kumari Priya (2321CS02)	Raghvendra Kumar (2221CS27)	
R408	Dr.Ranjeet Ranjan Jha	SAMAYUN SAIKH(2021PH35)	Mansi Baliyan(2121PH22)	Sunandini Swain (2121CB10)	
R502	Dr Avik Samanta	Lokesh Sharan Srivadtava (2121CE07)	Md Naquib Alam (2021CE24)	Mayank Sah (2221CS09)	Vivek Kumar (2021ME18)

28-04-2024	End Sem Exam	Evening	2PM-5PM		
Room	Invigilator 1	Invigilator 2	Invigilator 3	Invigilator 4	Invigilator 5
R101	Dr. Mahesh K H Kolekar	Shubham Anand (2021EE07)			
R102	Dr. Mayank Agarwal	Aizan Zafar (1921CS17)	Ishwar Chandra Mahto (2221CS30)	Asres Temam Abagissa (2121CS19)	
R104	Dr Udit Satija	Rohit Kumar Singh (1921EE19)	Priya Singh (1921EE17)	Divya Singh (1921CS21)	
R107	Dr. Anirban Mahto	Prayag Kumar (ME)	Akhilesh Kumar Tiwari (2121ME02)	JYOTI KUMARI (1921CS22)	
R109	Dr. Sujoy Kumar Samanta	Indrajeet Kumar (ME)	Tibebu Bekel Shana (2121CS21)	Muskan Kanwar(2321HS03)	
R301	Prof. Jimson Mathew	Adarsh Ravi (2021EE01)			
R302	Dr. Probir Saha	Harshdeep Sharma (2121ME06)			
R303	Dr Sudhir Varma	Rashi Srivastava (2121CB15)	Sana Perween (2121CB11)	Shailesh Kumar Yadav (2021CE26)	
R304	Dr. Taraknath Kobaku	Deepak Kumar (2121EE28)			
R308	Dr Koushik Roy	Atif Hussain (2121CE01)	Asha Shuhla (2121MA18)	Raushan Kumar (2221CB13)	
R408	Dr. Akash Singh	AISWARYA R(2121PH01)	SIBANISANKAR SAHOO(2121PH23)	RAHUL KUMAR(2121PH25)	
R502	Dr. Balendu Bhooshan Upadhyay	Abhijnan Pritam Sarma(2321HS01)	SANDEEP KUMAR (2121CS29)	Rupesh Pandey (2021MA20)	Subham Paul (2021MA25)

29-04-2024	End Sem Exam	Evening	2PM-5PM		
Room	Invigilator 1	Invigilator 2	Invigilator 3	Invigilator 4	Invigilator 5
R101	Dr Nalin Bharti	Dhiren Kumar Nayak (EE)			
R102	Dr. Abyayananda Maiti	Kumar Swapnil (EE)	Ratnesh Kumar Joshi (1921CS28)	Sujeet Kumar (2021EE08)	
R103	Dr Pradipta Chakraborty	Mr. Ved Prakash (JTS, MME)			
R104	Dr. Avneet Kumar	Varun Kumar (EE)	Shubham Anand (2021EE07)	APPICCHARLA RAMAKRISHNA (2021CS01)	
R105	Dr. Akhilendra Singh	Rakesh Kumar Singh (2121ME12)			
R106	Dr. Subhabrata Paul	Sk Aziz (2021MA22)			
R107	Dr. Surajit Kumar Paul	Pramod Prakash Dubey (ME)	Mohit Sharma (2121ME10)	Gitanjali Kumari (2021CS03)	
R108	Dr. S. K. Pandey	Murali B (EE)			
R109	Dr. Abhishek Raj	Ravikant Kumar (ME)	Rajnish Mishra (2121ME11)	Md Shahbaz Nazami (2021CS04)	
R110	Dr. S. Sivasubramani	ALLARAKHA SHIKDER (2121PH02)			
R301	Dr. Amit Kumar Verma (MA)	Anuj Kumar Umrao (2021MA07)			
R303	Dr. Akshar Tripathi	Priyam Mishra (2121CE10)	Karnati Ganesh Reddy (2221CB11)	Manish Meena (2221CB03)	
R308	Dr. Ajay D. Thakur	Chandan kumar Gupta (2221MA02)	Anindita Saha (2121CB02)	Abhinav Anand (2121CE15)	
R408	Dr. Sunil Kumar Singh	Ram Chandra Prajapati (ME)	Krishna Veer Singh Gurjar (2021ME08)	NEHA PRAMANICK (2121CS06)	
R502	Dr Meghna Dutta	Subodh Kumar Azad (CBE)	Sarmistha Das (2221CS21)	Piyush Kumar Garg (2021CS05)	Sana Perween (2121CB11)

30-04-2024	End Sem Exam	Evening	2PM-5PM		
Room	Invigilator 1	Invigilator 2	Invigilator 3	Invigilator 4	Invigilator 5
R101	Dr. Ranjeet Ranjan Jha	Ankit Kumar Kushwaha (2121CE16)			
R102	Dr. Raghavan K. Easwaran	Sonu Kumar Kashyap (ME)	Mazhar Hussain (2121ME25)	Arihant Patwari (2221MA09)	
R103	Dr. Rahul Kumar Singh	Ashish (2021EE12)			
R104	Dr. Atanu Kumar Metya	Nurul Hasan (CEE)	Md Yasir Shaikh (2221CE16)	Ankita Yadav (2321MA01)	
R105	Dr. Y. K. Singh	Shreya Das (2121EE15)			
R106	Dr Om Prakash (CE)	KHASHTI DATT PANDEY(2121PH05)			
R107	Dr Deepu P	Vishal Tiwari (ME)	Ajmit Kumar (2121ME22)	Anoop Kushwaha (2221MA11)	
R109	Dr Sourav Gur	Rahul Kumar (2221CE08)	Pradeep Kumar Sahu (2321MA03)	Md Alquma Haider (2021CB09)	
R110	Dr. S. K. Parida	Piyali Pal (2021EE24)			
R301	Prof. Manabendra Pathak	Avinash Upadhyay (2121ME24)			
R302	Dr. C.S Prajapati	Rajeshwar Yadav (2021CS06)			
R303	Dr. Shushmitha P.	Ramanand Singh (2221CE15)	Rupesh Pandey (2021MA20)	Sunandini Swain (2121CB10)	
R304	Dr. Sushant Kumar	ANIRBAN SAHA (2021CS13)			
R305	Dr. Udit Satija	Nilpa Kumari (2021EE22)			
R306	Dr. Anup Keshri	Manish Meena (2221CB03)			
R308	Dr. Sandeep Aashish	Rajesh Kumar (2121CB07)	Raushan Kumar (2221CB13)	Sk Aziz (2021MA22)	
R408	Dr. Sudhansu Shekhar Panda	Budhram Kisku (ME)	Surya Prakash Singh (2121ME18)	Sonu (2021MA23)	
R502	Dr Syed KK Hussaini	Subodh Kumar Azad (CBE)	Rakesh Raushan (2321CE06)	Prashant Kumar (2321CE04)	Subham Paul (2021MA25)

01-05-2024	End Sem Exam	Evening	2PM-5PM		
Room	Invigilator 1	Invigilator 2	Invigilator 3	Invigilator 4	Invigilator 5
R101	Dr. T. Rajagopala Rao	Amit Shanker Sant (CEE)			
R102	Dr Koushik Roy	SUSHREE NIBEDITA ROUT(2021PH31)	MEDHASREE GHOSH (2121CS05)	SRISHTI GUPTA (2021CS38)	
R104	Dr. Mayank Agarwal	KOMALBEN SHARADKUMAR PANDYA (2021CS17)	MD Shayan Sabri (2321CE12)	SUJIT CHOWDHURY (2021CS35)	
R107	Dr. Soumya Jyoti Ray	SAMBIT KUMAR BISWAL(2121PH09)	Shivani Gupta (2221CS18)	SURBHI RAJ (2021CS36)	
R109	Dr. Ranjan Kr. Behera	Dr. Rahul Mishra	Punyesh Kumar Jha (2121EE27)	Pabitra Kumar Tunga (1921MA02)	
R303	Dr. K. C. Ray	Shivani Singh (2021EE32)	MOBASSIR AHMAD(2121PH06)	SRIGANAPATHY RAGHAV RV(2121PH13)	
R502	Prof. Mayank Tiwari	Kadali Mani Shankar (2221ME03)	SHRUTI SAXENA (2021CS31)	SAURABH SHARMA (2021CS30)	Md shahbaz nazami (2021CS04)

02-05-2024	End Sem Exam	Evening	2PM-5PM		
Room	Invigilator 1	Invigilator 2	Invigilator 3	Invigilator 4	Invigilator 5
R101	Dr. Satendra Kumar	Subhashree (2121HS11)			
R102	Dr. Samrat Mondal	Bipasha (2221HS06)	Parvathy (2121HS19)	NASEEM BABU (2021CS22)	
R103	Dr. Murshid Imam	Zawed Alam (2221ME14)			
R104	Dr. Rishi Raj	Nadamala (2121HS21)	PRANAB SAHOO (2021CS25)	NARENDRA SINGH LODHI (2021CS21)	
R105	Dr. Sandan Sharma	Anushka (2221HS08)			
R107	Dr. Rishav Singh	Argha (2121HS23)	Arun (2221HS04)	SANDEEP KUMAR PATEL (2021CS28)	
R109	Dr Smriti Singh	Spandan (2221HS05)	PRIYANSHU PRIYA (2021CS26)	Subham Raj (2221CS25)	
R301	Dr Om Prakash (CE)	Bijoy (2121HS08)			
R302	Dr Priyanka Tripathi	Anwasha (2121HS18)	Lokesh Sharan Srivastava (2121CE07)		
R303	Dr Sweta Sinha	Sujata (2221HS14)	Sony (2221HS18)	Pramadhanatha Reddy Pocha (2121CE18)	
R304	Dr. Devinder Yadav	Tribarna (2221HS24)			
R305	Dr. Shushmitha P.	NELSON SHARMA (2121CS07)			
R306	Dr. Jobin Jose	Ahmad Rashid (2021CE05)			
R308	Dr Nalin Bharti	Ujjawal (2221HS12)	Labani (2221HS12)	NEHA PRAMANICK (2121CS06)	
R309	Dr Aditya Raj	Shivani Sain (2321MA04)			
R408	Dr Papia Raj	Amrita (2221HS16)	Panchali (2221HS17)	Preeti Puja(2321HS05)	
R502	Dr. Jagnath Malik	Gargi Dowarah(2321HS02)	Mohit (2221HS14)	Sohini (2221HS02)	Manu (2221HS20)

03-05-2024	End Sem Exam	Evening	2PM-5PM		
Room	Invigilator 1	Invigilator 2	Invigilator 3	Invigilator 4	Invigilator 5
R102	Dr. Sumanta Gupta	Vikash Kumar (2321EE07)	Priyadarshni (2221CS16)	NARENDRA SINGH LODHI (2021CS21)	
R104	Dr. Arijit Roy	SANDEEP KUMAR PATEL (2021CS28)	Dibyanayan Bandyopadhyay (2321CS14)	Kartik Kaushik (2221CS32)	
R107	Dr. Mahesh K H Kolekar	Dr. Rahul Mishra	Baban Gain (2321CS12)	Mohd Mufeed (2221EE25)	
R109	Dr. Y K Singh	Shreya Das (2121EE15)	Subrata Das (2221CS13)	Debasmita Manna (2121CS18)	
R301	Dr. Chandranath Adak	Utsav Kumar Nareti (2221CS28)			
R303	Dr. Ranjit Laha	ANKUSH KUMAR(2121PH18)	JYOTI BIKASH MOHAPATRA(2221PH 05)	Suresh Tiwari (2221CH08)	
R308	Dr. Dinesh Kumar Kotnees	TUPAN DAS(2121PH14)	ANAMIKA SHARMA(2221PH01)	Shridhar Kumar (2121MA11)	
R408	Dr. Naveen K. Nishchal	Krishna Jee (CBE)	PRIYANKA PRIYADARSHANI SAMAL(2121PH26)	Nurabul Mondal (2221CH06)	
R502	Dr. Arijit Mondal	SAURABH SHARMA (2021CS30)	Akash Ghosh (2321CS19)	Prince Kumar (2321CS21)	Debashis Das (2221CS31)

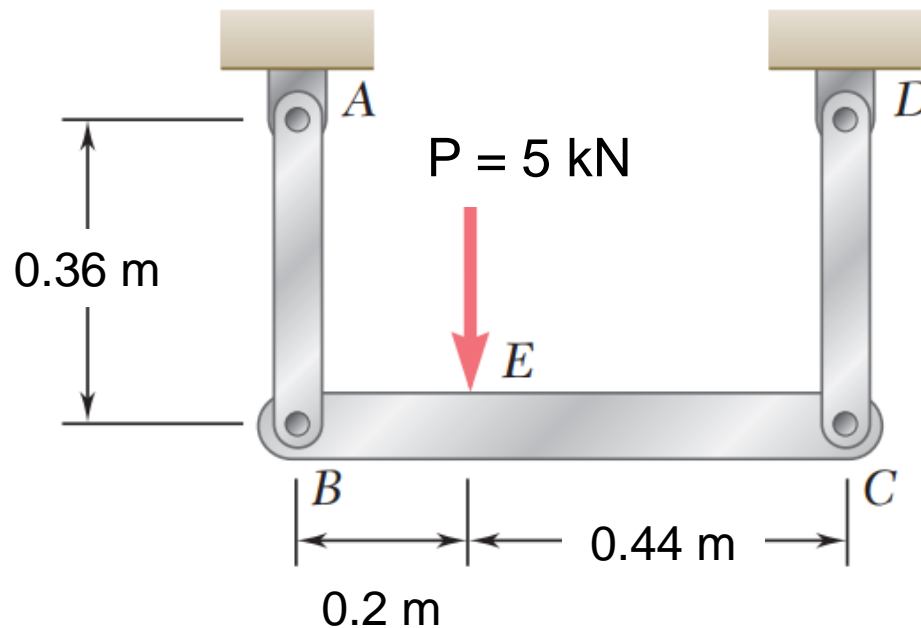


Tutorial 8

G1-10, Engineering Mechanics - ME102

Question 1: Unsolved Problem 2.25 in book

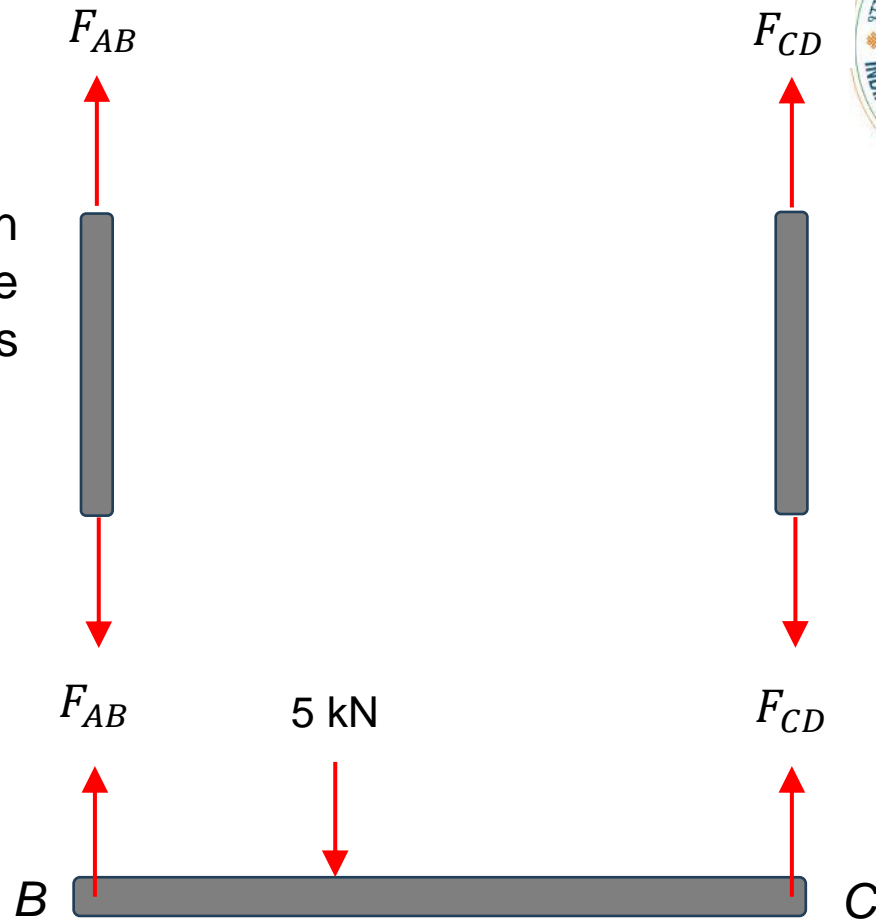
Each of the links AB and CD is made of aluminum ($E=75$ GPa) and has a cross-sectional area of 258 mm². Knowing that they support the rigid member BC , determine the deflection of point E .



Question 1: Solution

We draw the FBD of member BC .

At point B and C , a pin connection is there, as a result we show the internal forces at point B as F_{AB} and at C as F_{CD} .

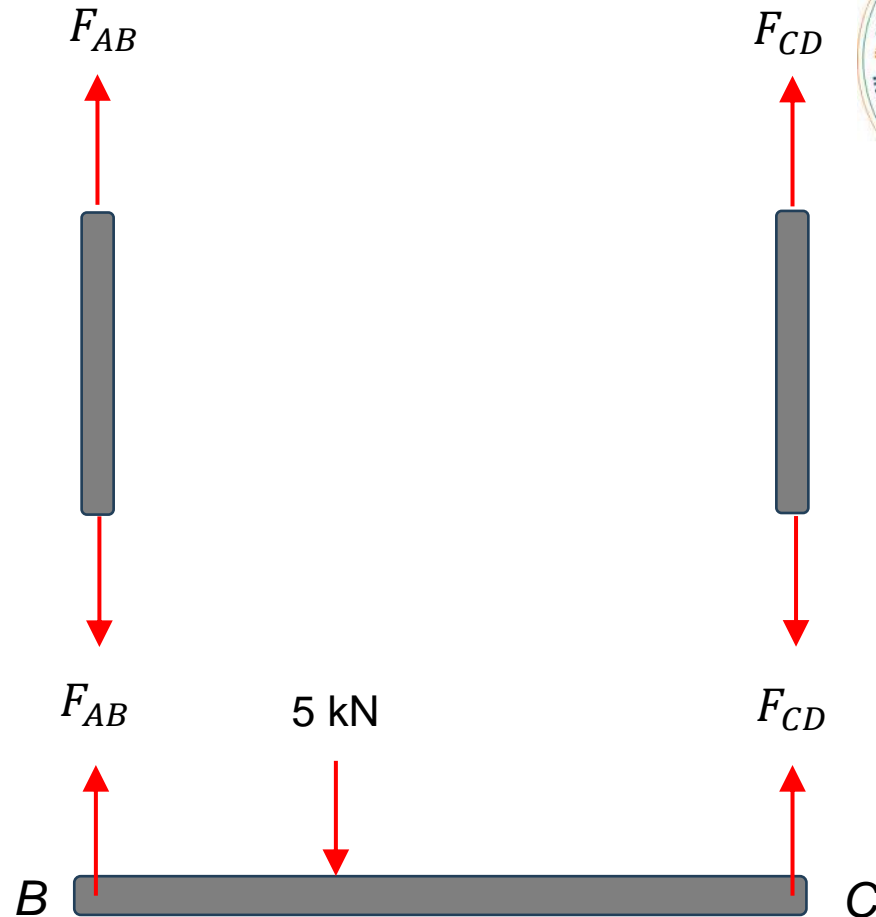


Considering above FBD, taking moment about point C , we have

$$\Sigma M_C = 0: -(0.64)F_{AB} + (0.44)(5 \times 10^3) = 0$$

$$\Rightarrow F_{AB} = 3.44 \text{ kN}$$

Question 1: Solution



Taking moment about point B , we have

$$\Sigma M_B = 0: (0.64)F_{CD} - (0.20)(5 \times 10^3) = 0$$

$$\Rightarrow F_{CD} = 1.56 \text{ kN}$$

Question 1: Solution (Cont....)

Considering link AB ,

$$\delta_{AB} = \frac{F_{AB} L_{AB}}{EA}$$

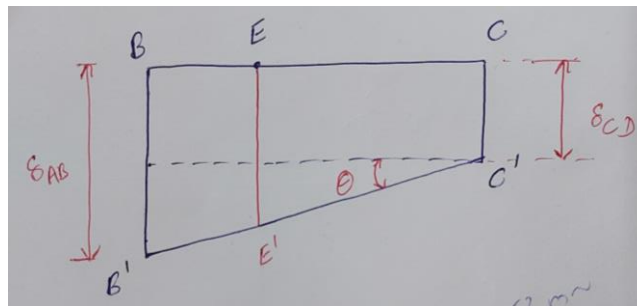
$$\Rightarrow \delta_{AB} = 6.4 \times 10^{-5} \text{ m}$$

Considering link CD ,

$$\delta_{CD} = \frac{F_{CD} L_{CD}}{EA}$$

$$\Rightarrow \delta_{CD} = 2.9 \times 10^{-5} \text{ m}$$

Now, we try to imagine the deformation diagram (see below figure) considering BC as rigid link. Next, member AB and CD is deformable members and from the deformation calculated above δ_{AB} is more than δ_{CD} .





Question 1: Solution (Cont....)

From deformation diagram, we can calculate the angle θ

$$\Rightarrow \tan \theta = \frac{\delta_{AB} - \delta_{CD}}{\text{length of member } BC}$$

For small angle θ , $\tan \theta \approx \theta$

The deflection at point E can be related as,

$$E\acute{E} = \delta_{CD} + l_{EC}\theta$$

$$E\acute{E} = 2.9 \times 10^{-5} + 0.44 \times \frac{6.4 \times 10^{-5} - 2.9 \times 10^{-5}}{0.64}$$

Hence, the deflection at point E is,

$$\delta_E = 5.3 \times 10^{-5} \text{ m}$$

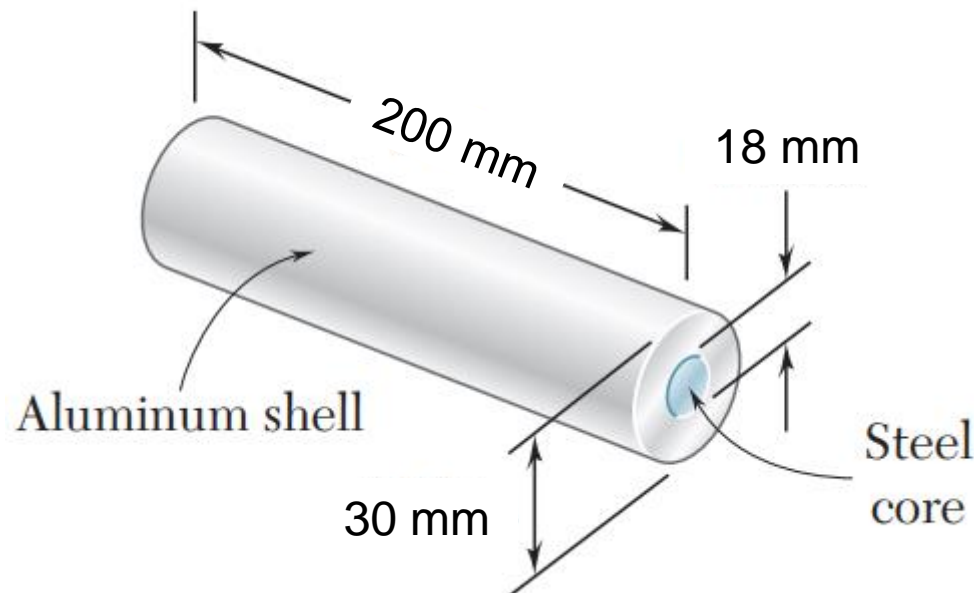
or

$$\delta_E = 0.053 \text{ mm}$$

Question 2: Unsolved Problem 2.48 in book

The assembly shown consists of an Aluminum shell ($E_a = 73 \text{ GPa}$, $\alpha_a = 23.2 \times 10^{-6}/^\circ\text{C}$) fully bonded to a steel core ($E_s = 200 \text{ GPa}$, $\alpha_s = 11.7 \times 10^{-6}/^\circ\text{C}$) and is unstressed. Determine (a) the largest allowable change in temperature if the stress in the aluminum shell is not to exceed 41 MPa , (b) the corresponding change in the length of the assembly.

NOTE: You may assume that the force of interaction between the Aluminum shell and the steel core as axial forces for both members.





Question 2: Solution

In this problem, since $\alpha_a > \alpha_s$, hence for positive rise in temperature, the Aluminium shell will try to elongate more than the Steel core. However, due to the bonding between them, they will elongate by the same amount, which will imply compressive stresses on Aluminum shell and tensile stresses on the Steel core. As mentioned, these forces can be assumed to be axial for both members.

According to question the stress in Aluminum shell should not exceed 41 MPa.

So, we can assume that $\sigma_a = -41 \text{ MPa}$ (minus sign indicates compression)

Moreover, in this shell-core assembly, the deformation can be related as,

$$\delta_a = \delta_s = \delta \quad \longrightarrow \quad (1)$$

and

$$P_a + P_s = 0 \quad \longrightarrow \quad (2)$$



Question 2: Solution

According to question the stress in aluminum shell should not exceed 41 MPa.

So, we can assume that $\sigma_a = -41 \text{ MPa}$ (minus sign indicates compression)

Moreover, in this shell-core assembly, the deformation can be related as,

$$\delta_a = \delta_s = \delta \longrightarrow (1)$$

and

$$P_a + P_s = 0 \longrightarrow (2)$$

Area of aluminum shell is obtained as,

$$A_a = \frac{\pi}{4} (d_o^2 - d_i^2) = \frac{\pi}{4} (30^2 - 18^2) = 452.4 \text{ mm}^2$$

Area of steel core is obtained as,

$$A_s = \frac{\pi}{4} d^2 = \frac{\pi}{4} (18)^2 = 254.5 \text{ mm}^2$$



Question 2: Solution (Cont....)

From Eq (2), we have

$$\sigma_s A_s = -\sigma_a A_a$$

$$\Rightarrow \sigma_s = \frac{-\sigma_a A_a}{A_s} = \frac{41 \times 452.4}{254.5}$$

$$\Rightarrow \boxed{\sigma_s = 72.88 \text{ MPa}}$$

From Eq (1), we have

$$(\delta_m)_s + (\delta_{th})_s = (\delta_m)_a + (\delta_{th})_a$$

$$\frac{\sigma_s}{E_s} + \alpha_s \Delta T = \frac{\sigma_a}{E_a} + \alpha_a \Delta T$$

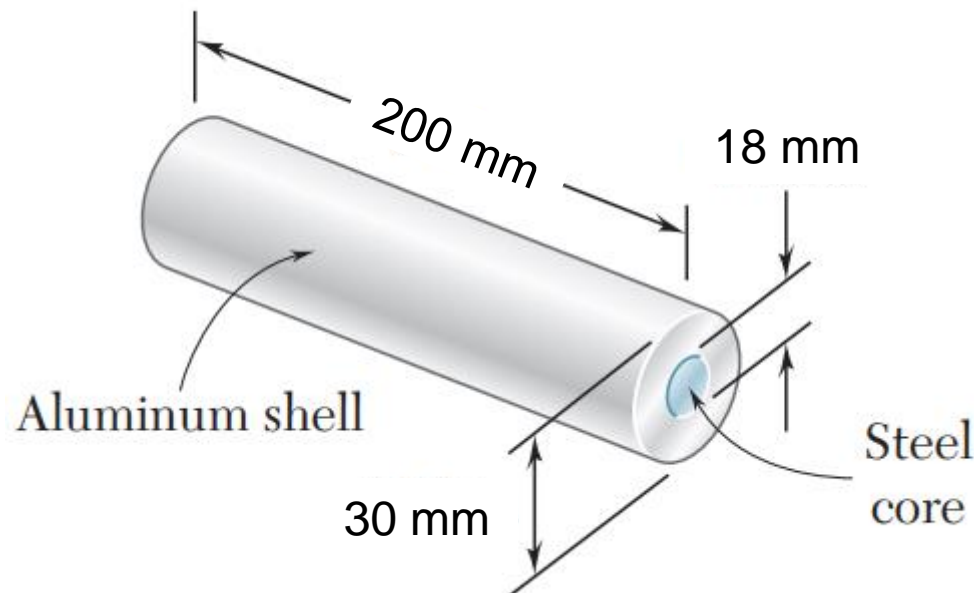
Upon putting all the known values, the rise in temperature is evaluated as,

$$\Rightarrow \boxed{\Delta T = 80.5^\circ\text{C}}$$

For Evaluation

Solve part b, the underlined portion of the problem, and submit.

The assembly shown consists of an aluminum shell ($E_a = 73 \text{ GPa}$, $\alpha_a = 23.2 \times 10^{-6}/^\circ\text{C}$) fully bonded to a steel core ($E_s = 200 \text{ GPa}$, $\alpha_s = 11.7 \times 10^{-6}/^\circ\text{C}$) and is unstressed. Determine (a) the largest allowable change in temperature if the stress in the aluminum shell is not to exceed 41 MPa, (b) the corresponding change in the length of the assembly.





Question 2: Solution (Cont....)

(b) The change in length of assembly

From Eq (3), the strain is given as,

$$\varepsilon = \frac{\sigma_s}{E_s} + \alpha_s \Delta T = \frac{\sigma_a}{E_a} + \alpha_a \Delta T$$

4 marks

$$\varepsilon = \frac{72.88}{200 \times 10^3} + 11.7 \times 10^{-6} \times 80.5$$

$$\Rightarrow \boxed{\varepsilon = 1.30 \times 10^{-3}}$$

3 marks

Now,

$$\varepsilon = \frac{\delta}{L}$$

1 marks

$$\delta = 1.30 \times 10^{-3} \times 200$$

$$\boxed{\delta = 0.26 \text{ mm}}$$

2 marks