

PHYSICAL SCIENCES P1 REVISION DOCUMENT

NEWTON'S LAWS

State the following laws

1. Newton's second law of motion
2. Newton's law of universal gravitation

QUESTION 2



A block of mass 1 kg is connected to another block of mass 4 kg by a light inextensible string. The 1 kg block is on the inclined plane, by means of a constant 40 N force parallel to the plane as shown in the diagram below. The magnitude of the kinetic frictional force between the surface and the 4 kg block is 10 N. The coefficient of kinetic friction between the 1 kg block and the surface is 0,20.

1. State Newton's third law of motion in words. (2)
2. Draw a labelled free-body diagram showing ALL the forces acting on the 1 kg block as it moves up the incline. (5)
3. Calculate the magnitude of the:
 1. Kinetic frictional force between the 1 kg block and the surface (2)
 2. Tension in the string connecting the two blocks (5)

[14]

QUESTION 15

Block P, of mass 2 kg, is connected to block Q, of mass 3 kg, by a light inextensible string. Both blocks are on a plane inclined at an angle of 30° to the horizontal. Block Q is pulled by a constant force of 40 N at an angle of 25° to the incline.



Block P moves on a rough section, AB, of the incline, while block Q moves on a frictionless section, BC, of the incline. See diagram.

An average constant frictional force of 2,5 N acts on block P as it moves from A to B up the incline.

1. State Newton's Second Law in words. (2)
2. Draw a labelled free-body diagram for block P. (4)
3. Calculate the magnitude of the acceleration of block P while block P is moving on section AB. (8)

4. If block P has now passed point B, how will its acceleration compare to that calculated in QUESTION 15.3? Choose from: GREATER THAN, SMALLER THAN, or EQUAL TO. Give a reason for the answer. (2)

[14]

Physical Science P1 2013 Memorandum

Thirumalaisamy P.
Velavancorresponding



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Nuclear Science Abstracts, 1976 **Scientific and Technical Aerospace Reports**, 1992 *Title Announcement Bulletin*, 1956 *Intelligence Elites and Public Accountability* Vian Bakir, 2018-04-17 This book provides a definitive overview of the relationships of influence between civil society and intelligence elites The secrecy surrounding intelligence means that publication of intelligence is highly restricted barring occasional whistle blowing and sanitised official leaks These characteristics mean that intelligence if publicised can be highly manipulated by intelligence elites while civil society's ability to assess and verify claims is compromised by absence of independent evidence There are few studies on the relationship between civil society and intelligence elites which makes it hard to form robust assessments or practical recommendations regarding public oversight of intelligence elites Addressing that lacuna this book analyses two case studies of global political significance The intelligence practices they focus on contemporary mass surveillance and Bush era torture intelligence policies have been presented as vital in fighting the Global War on Terror enmeshing governments of scores of nation states while challenging internationally established human rights to privacy and to freedom from torture and enforced disappearance The book aims to synthesise what is known on relationships of influence between civil society and intelligence elites It moves away from disciplinary silos to make original recommendations for how a variety of academic disciplines most likely to study the relationship between civil society and intelligence elites international relations history journalism and media could productively cross fertilise Finally it aims to create a practical benchmark to enable civil society to better hold intelligence elites publicly accountable This book will be of great interest to students of intelligence studies surveillance media journalism civil society democracy and IR in general Technical Abstract Bulletin, **Stephens' Detection and Evaluation of Adverse Drug Reactions** John Talbot, Jeffrey K. Aronson, 2011-12-19 The detection and evaluation of adverse drug reactions is crucial for understanding the safety of medicines and for preventing harm in patients Not only is it necessary to detect new adverse drug reactions but the principles and practice of pharmacovigilance apply to the surveillance of a wide range of medicinal products Stephens' Detection and Evaluation of Adverse Drug Reactions provides a comprehensive review of all aspects of adverse drug reactions throughout the life cycle of a medicine from toxicology and clinical trials through to pharmacovigilance risk management and legal and regulatory requirements It also covers the safety of biotherapeutics and vaccines and includes new chapters on pharmacogenetics proactive risk management societal considerations and the safety of drugs used in oncology and herbal medicines This sixth edition of the classic text on drug safety is an authoritative reference text for all those who work in pharmacovigilance or have an interest in adverse drug reactions whether in regulatory authorities pharmaceutical companies or academia Praise for previous editions This book presents a comprehensive and wide ranging overview of the science of pharmacovigilance For those entering or already experienced in the pharmaceutical sciences this is an essential work from a review in E STREAMS a key text in the area of

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