

**Higher Specialist Diploma - Portfolio Essay Titles for Submission in 2023**

**Regulations**

* Two essays must be included in the portfolio as evidence of experiential learning. If, when you applied to undertake the HSD, you indicated you wanted to submit in 2023 you must choose any two essay titles from either the 2022 or 2023 list of essay titles. If you had initially aimed to submit in 2022 but have had to defer one essay title can come from the 2021 list but the other essay must come from either the 2022 or 2023 list.
* Essays should be 3000 words (±10%) with a font size of at least 12 point. Figures, tables and their respective legends and the reference list are not included in the word count of the essay.
* Candidates must use appropriate material from various sources within both essays and these must be referenced in either the Harvard **or** Vancouver format. Guidance on how to reference in either format can be found on the IBMS website here:

<https://www.ibms.org/education/ibms-qualifications-resources/>

* Candidates should note that the essays will be entered into the originality checking software system called Turnitin. This software produces a report that highlights not only how much text is similar to other sources but also where this material is located.

The similarity score that is produced as part of its Turnitin report requires the academic judgement of the examiners and the IBMS Head of Examinations to interpret whether this necessitates any action. Where plagiarism is detected, or if the similarity score is unacceptably high, it will be treated as academic malpractice and may have serious consequences. This could include the failure of the portfolio.

**Important Points to Remember**

The completion of the two essays forms parts of the portfolio requirements for the HSD. These essays help candidates to demonstrate to the examiners that they have a comprehensive understanding of a specific field of biomedical science and knowledge and understanding of current issues and developments which are key learning outcomes of the HSD. At this level, you should be able to demonstrate:

* a systematic understanding of knowledge and a critical awareness of current problems, much of which is at, or informed by, work at the forefront of the academic discipline
* a comprehensive understanding of techniques applicable to their own research
* originality in the application of knowledge
* a conceptual understanding that enables critical evaluation of current research in their discipline

In constructing your essays you should:

* critically evaluate/discuss
* judge the relevance and significance of information
* evaluate claims, inferences, arguments and explanations
* construct clear and coherent arguments
* form well-reasoned judgements and decisions
* integrate and appraise reading and research
* be original in your application of knowledge

**HSD Essay Titles for 2023**

**Cellular Pathology**

Critically discuss and explain the histopathological findings of COVID 19 infection.

Critically appraise the value of a combined approach employing both molecular and immunohistochemical techniques in the study of cancer within the field of precision medicine.

**Clinical Chemistry**

Critically discuss the role of the reference range within Clinical Chemistry and its reliability for disease detection.

**Starter References**

Cheung AS, Lim HY, Cook T, Zwickl S, Ginger A, Chiang C, Zajac JD. Approach to Interpreting Common Laboratory Pathology Tests in Transgender Individuals. J Clin Endocrinol Metab. 2021 Mar 8;106(3):893-901. doi: 10.1210/clinem/dgaa546. PMID: 32810277; PMCID: PMC7947878.

Whyte MB, Kelly P. The normal range: it is not normal and it is not a range. *Postgraduate Medical Journal*2018;**94:**613-616.

Critically evaluate the problem and impact of inappropriate testing in Chemistry.

**Starter References**

Salinas, M., Flores, E., López-Garrigós, M., Leiva-Salina,C., 2018. Laboratory test inappropriateness: lessons revisited and clarified in seven questions. *Journal of Laboratory and Precision Medicine,*3 (4).

Brown, I., Tran, A., Soong, C. and Okrainec, K., 2021. The role of electronic versus written order sets in inappropriate laboratory testing among hospitalized medical patients. *International Journal of Medical Informatics,*153, 104546.

**Cytopathology**

Critically discuss the range and role of new technologies on the delivery of cytology services in the 21st century.

Discuss the current and potential future roles for biomedical scientists in diagnostic cytology.

**Haematology**

Critically discuss the role of novel treatments for haemophilia in rebalancing haemostasis.

Discuss the role of the laboratory in the diagnosis, classification and monitoring of lymphoproliferative disorders.

**Immunology**

Critically appraise the diagnostic accuracy and cost-effectiveness of component-resolved diagnostics in the investigation of allergy.

Discuss the roles of phagocytes in immunity and associated defects.

**Leadership and Management**

Staff recruitment and induction is a key activity for managers seeking to ensure longevity of staff appointments. Critically discuss different approaches to recruitment and induction, the impact these may have on staff retention and how you would seek to improve these.

Clearly define what you see as the most significant two or three key national challenges facing Pathology managers currently. Justify your choices and evaluate approaches to dealing with these challenges practically and economically

**Medical Microbiology**

Using specific bacterial and disease examples, critically discuss the role of biofilm forming bacteria in human disease progression and severity. Introduce into your answer strategies for the treatment and prevention of infection by biofilm forming bacteria.

Critically assess how the use of novel beta-lactam based antimicrobials and antibiotic stewardship can be used to combat the emergence of antibiotic resistance.

**Transfusion Science**

Describe, in detail, the major antigens that belong to the Kell blood group system and the clinical significance of Kell blood group system antibodies in terms of both haemolytic transfusion reactions and haemolytic disease of the fetus and newborn.

The 2020 ‘SHOT’ report highlighted an increase in transfusion related deaths and incidents caused by transfusion delays, both in provision and administration. Critically discuss the causative factors for such a delay and the measures that can be put in place to prevent it.

**Virology**

Critically discuss the contribution that whole genome (next generation) sequencing can make to clinical virology.

The World Health Organization has set a target for “elimination of viral hepatitis as a public health threat” by 2030. Critically evaluate the role that diagnostic virology services can play in achieving this aim.